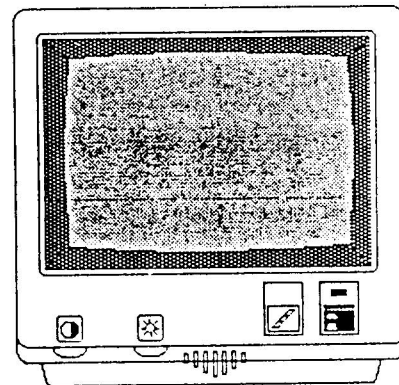
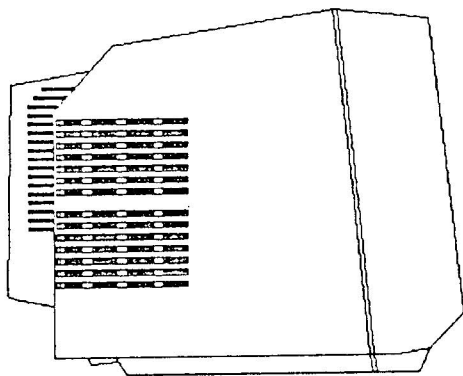




SERVICE MANUAL



For The Supervision 12" Colour Monitor Series:

Supervision II, Supervision III,
Supervision IV, Supervision IVm
Supervision 620, Supervision 625,
Supervision 630 & Supervision 640



Issue Number: 0017

Issued By:

Date of Issue: 1/9/1986

13/9/89: Original manuals reprinted and combined into one
New cover style plus inclusion of document control,
safety notices and adjustment guide.



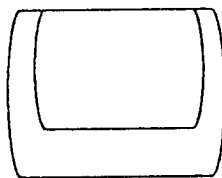
A General Guide to monitor display adjustment

The diagrams below show how to correct certain display problems using commonly available external monitor controls. Not all monitors have the full range of controls mentioned available externally, although they are all usually present in some form (often as factory pre-set controls on the internal circuit boards).

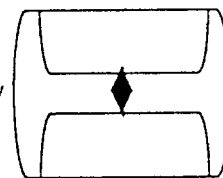
CAUTION - NEVER ADJUST A MONITOR'S CONTROLS WITH A METAL TOOL. ALWAYS USE A PLASTIC ADJUSTMENT TOOL.

Taxan monitors are usually provided with such a tool where external adjustments are likely to be required.

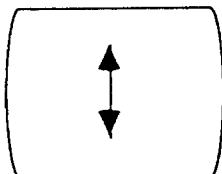
Vertical Position - adjust if image is not vertically centred on the screen



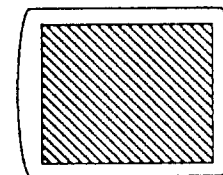
Vertical Hold - adjust if the image rolls vertically



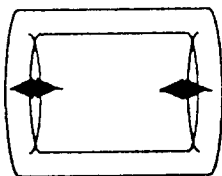
Vertical Size - adjust if the image does not fill the screen in the vertical direction.



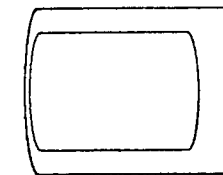
Horizontal Hold - adjust if the image is composed of moving diagonal lines.



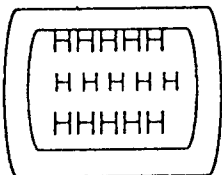
Side Pincushion - Adjust to straighten the sides of the image if they are curved inwards or outwards.



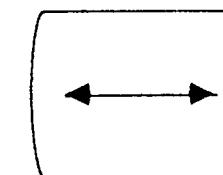
Horizontal Position - adjust to centre the image horizontally on the screen



Vertical Linearity - adjust if areas of the image are wrongly proportioned.



Horizontal Size - adjust if the image does not fill the screen in the horizontal direction.





Safety Notices

Please Note:

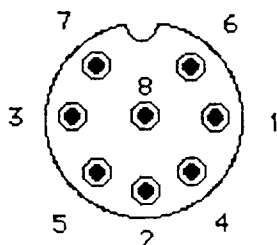
The following information is provided in the interests of safety.

- 1). This equipment is mains powered (230 Volts AC) and is therefore potentially hazardous once the cover is removed.
- 2). Only trained engineering staff should attempt any work on the unit with the cover removed.
- 3). While servicing the unit, protect the mains supply to the equipment under test and all electrically powered test equipment with a suitably rated Residual Current Circuit Breaker (rccb) unit. These devices are readily available and are designed to remove the mains supply quickly in the event of a serious leakage of current to earth.
- 4). Ensure all test equipment, and the unit under test is adequately earthed.
- 5). Always discharge the CRT before attempting any work on the high voltage power circuits.
- 6). We advise the use of Electrostatic Damage Prevention equipment when servicing electronic equipment containing static sensitive devices.



Connection & Configuration

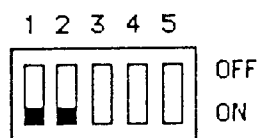
PIN CONNECTIONS (8 Pin DIN Connector)



- Pin 1 TXTN signal (disables text switch)
- Pin 2 Red video (TTL)
- Pin 3 Green video (TTL)
- Pin 4 Blue video (TTL)
- Pin 5 Intensity (TTL)
- Pin 6 Ground
- Pin 7 Composite sync (or horizontal sync if separate syncs are required)
- Pin 8 Vertical sync

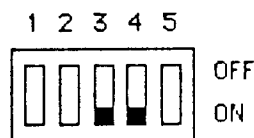
DIP Switch Settings for all models except Supervision 625 where only three switches are present since text mode colour is selected from the front panel.

1. Colour Mode



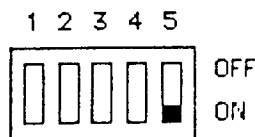
- ON ON - IBM
- OFF ON - Apple
- ON OFF - Japanese Computers
- OFF OFF - Standard Colours (BBC)

2. Text mode screen colours



- ON ON - Green text on black background
- OFF ON - Amber text on black background
- ON OFF - Black text on white background
- OFF OFF - White text on blue background *

3. Sync Polarity



- ON - Positive Composite Sync
 - Hsync ⊕ Vsync ⊖
 - Hsync ⊖ Vsync ⊕
- OFF - Negative Composite Sync
 - Hsync ⊕ Vsync ⊕
 - Hsync ⊖ Vsync ⊖

Supervision 625 has only three switches. Switches 1 & 2 select Colour mode as above. Switch 3 selects sync polarity as in Switch 5 above

IMPORTANT NOTICE FOR SERVICE PERSONNEL BEFORE SERVICING

PLEASE READ BEFORE ATTEMPTING SERVICE

1. While the monitor is in operation, do not attempt to connect or disconnect any wires.
2. Make sure the power cord is disconnected before replacing any components in the monitor.
3. When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the transistors in the monitor.
4. When servicing the H: V. area, be certain that the C. R. T anode is safely discharged to ground before removing the anode cap.
5. Caution must be exercised when servicing this monitor.
The regulator has no current limiting and even a momentary short of an output voltage could cause destruction of the pass transistors.

IMPORTANT NOTICE FOR SERVICE PERSONNEL BEFORE SERVICING

PLEASE READ BEFORE ATTEMPTING SERVICE

1. While the monitor is in operation, do not attempt to connect or disconnect any wires.
2. Make sure the power cord is disconnected before replacing any components in the monitor.
3. When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the transistors in the monitor.
4. When servicing the H. V. area, be certain that the C. R. T anode is safely discharged to ground before removing the anode cap.
5. Caution must be exercised when servicing this monitor.
The regulator has no current limiting and even a momentary short of an output voltage could cause destruction of the pass transistors.

2. Pin assignment

Pin no.	Signal
1	Reserved for special TEXT signal
2	Red video signal
3	Green video signal
4	Blue video signal
5	Intensity signal
6	Signal ground
7	Horizontal or composite sync signals
8	Vertical sync signal

HOW TO SET COLOR MODE

1. Setting the color mode

The color mode switch (a five-switch DIP unit) is on the rear panel. Set it as follows according to your computer.

(1) Mode 1

Color mode switch	Color
OPEN      1 2 3 4 5	IBM

(2) Mode 2

Color mode switch	Color
OPEN      1 2 3 4 5	AT & T (OLIVETTI)*

(3) Mode 3

Color mode switch	Color
OPEN      1 2 3 4 5	APPLE

(4) Mode 4

Color mode switch	Color
OPEN      1 2 3 4 5	NTSC

2. Pin assignment

Pin no.	Signal
1	Special TEXT signal (reserved for TAXAN APPLE RGB cards)
2	Red video signal
3	Green video signal
4	Blue video signal
5	Intensity signal
6	Signal ground
7	Horizontal and composite sync signals
8	Vertical sync signal

HOW TO SET COLOR MODE

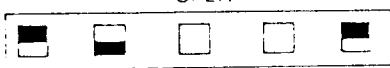
1. Setting the color mode

The color mode switch (a five-switch DIP unit) is on the rear panel. Set it as follows according to your computer.

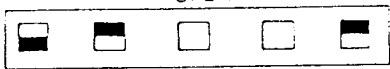
(1) IBM mode

Color mode switch	Computer
OPEN  1 2 3 4 5	IBM AT IBM XT IBM PC IBM PCjr

(2) APPLE color mode

Color mode switch	Computer
OPEN  1 2 3 4 5	• APPLE II Plus (APPLE II⁺) • APPLE IIe, IIc APPLE III

(3) Standard color mode

Color mode switch	Computer
OPEN  1 2 3 4 5	Japanese computer

2. Setting the sync signal input mode (fifth color mode switch)

The sync signal of nearly any personal computer can be input by turning off the fifth DIP switch. But the sync signal of a few computers can be input only with this switch on. The following table shows the switch setting for a number of sync signals.

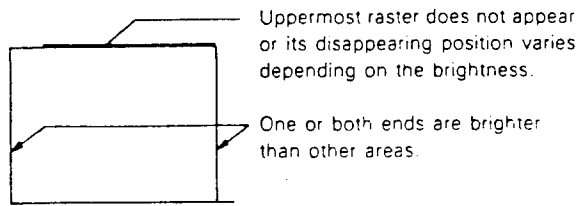
Color mode switch	Condition	Signal type
OPEN 1 2 3 4 5	A	H. sync: Positive TTL level V. sync: Negative TTL level
	B	H. sync: Negative TTL level V. sync: Positive TTL level
	C	H. V. sync composite, positive
OPEN 1 2 3 4 5	a	H. sync: Positive TTL level V. sync: Positive TTL level (AT&T)
	b	H. sync: Negative TTL level V. sync: Negative TTL level (IBM, JAPANESE)
	c	H. V. sync composite, negative

3. Setting the signal color display mode

Turning of the TEXT switch (on the front of the unit) changes the display to single-color mode. Super Vision monitor can now be used as a monochrome display monitor. There are four basic monochrome modes: green, amber, reversed white, and white on blue. The monochrome mode is set by the third and fourth DIP switches as follows.

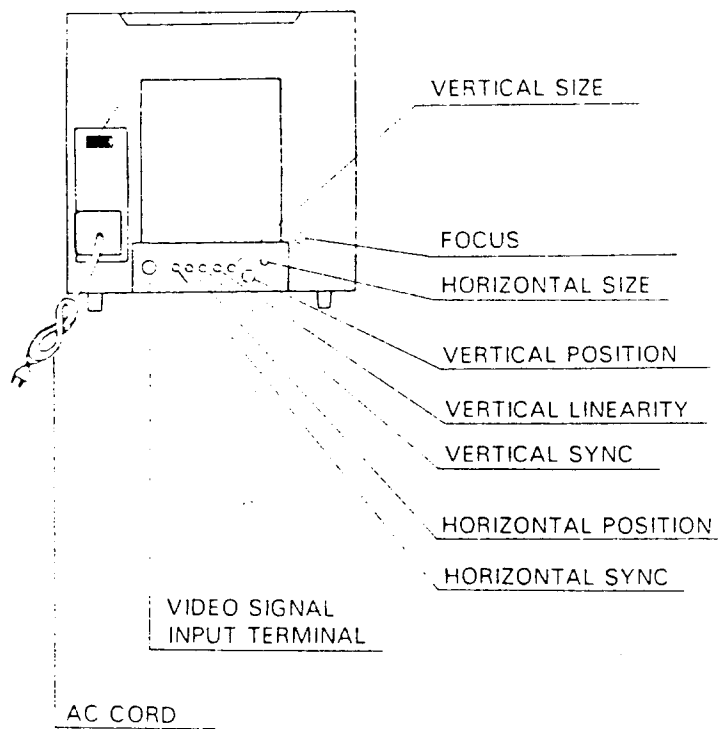
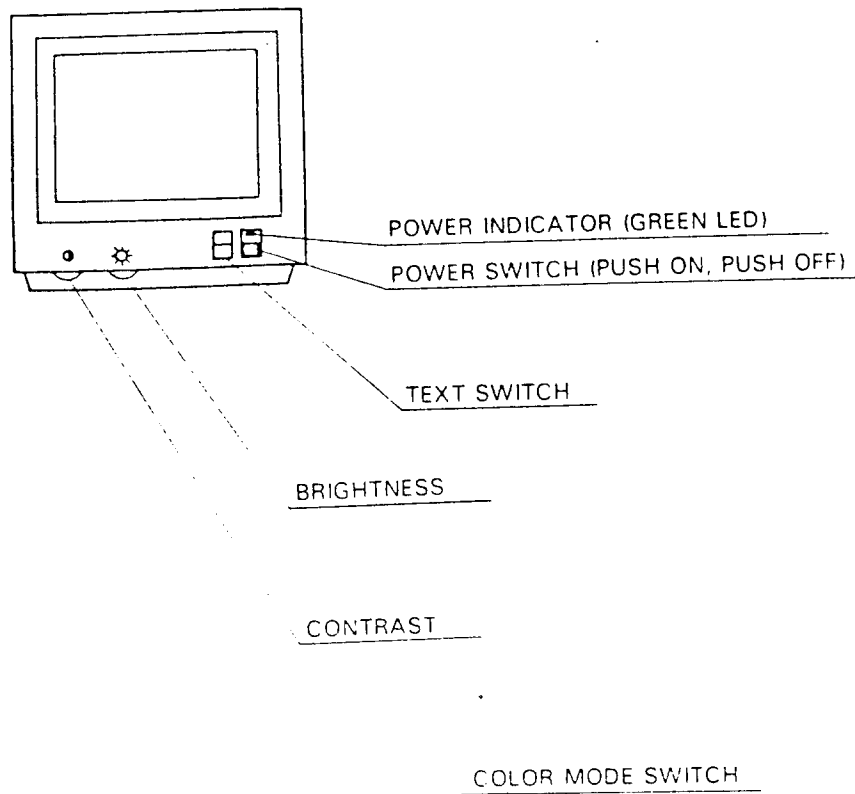
Color	Color mode switch
Green	OPEN 1 2 3 4 5
Amber	OPEN 1 2 3 4 5
** Reversed white	OPEN 1 2 3 4 5
** White on blue	OPEN 1 2 3 4 5

****Note:** In reversed white or white on blue mode, the following phenomena may appear as described on the right. These are quite normal for this mode.



Lowest two or three rasters run off the screen

INDICATORS AND CONTROLS



ADJUSTING THE DISPLAY

1. H. SIZE

If the horizontal size of the screen image is too short or too long, adjust the H. SIZE control for the correct size. (See illustration 1.)

2. V. SIZE

If the vertical size of the screen image is too short or too long, adjust the V. SIZE control for the correct size. (See illustration 2.)

3. H. POSI.

If the screen image shifts horizontally, adjust the H. POSI. control for a correct image. (See illustration 3.)

4. V. POSI.

If the screen image shifts vertically, adjust the V. POSI. control for a correct image. (See illustration 3.)

5. H. HOLD

If the screen image has horizontal stripes or if the image moves left or right, adjust the H. HOLD control for a clear stable image. (See illustration 4.)

6. V. HOLD

If the screen image moves or overlaps vertically, adjust the V. HOLD control for a stable image. (See illustration 4.)

7. FOCUS

Adjust the focus for the sharpest image. (See illustration 6.)

8. V. LIN.

Adjust the V. LIN control so the height of characters is even over the whole screen. (See illustration 7.)

9. CONTRAST

Turning the CONTRAST control clockwise increases the contrast, turning it counterclockwise decreases the contrast.

10. BRIGHT

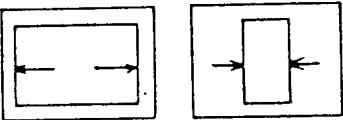
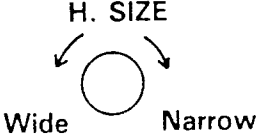
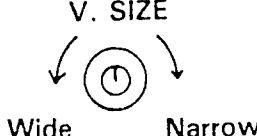
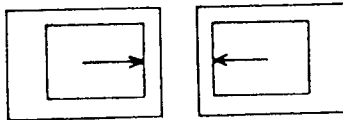
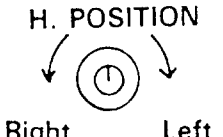
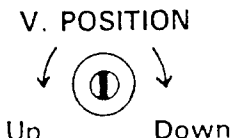
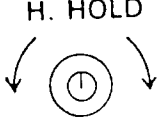
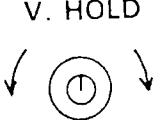
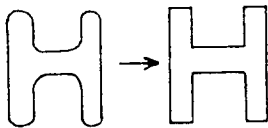
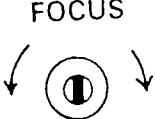
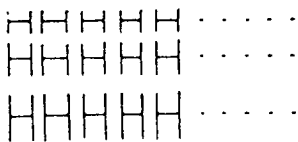
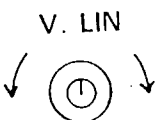
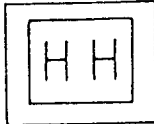
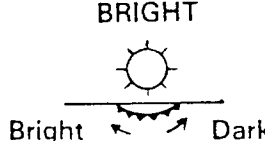
Turning the BRIGHT control clockwise makes the screen brighter, turning it counterclockwise makes it darker.

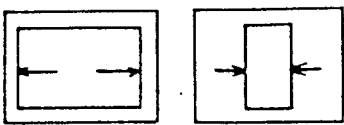
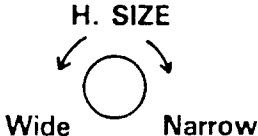
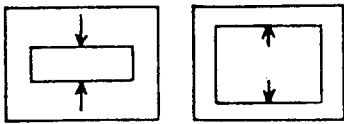
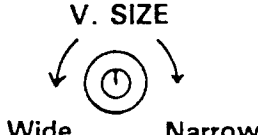
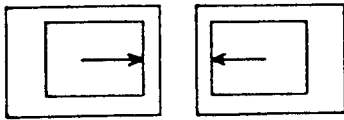
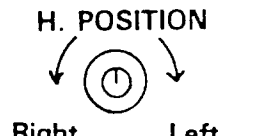
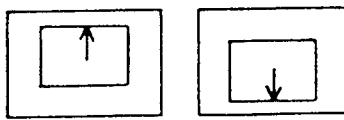
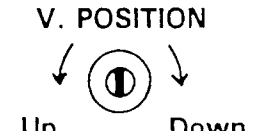
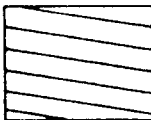
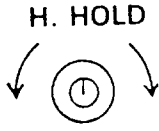
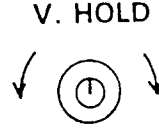
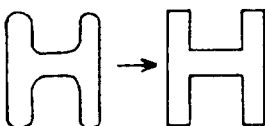
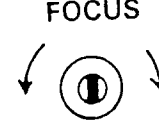
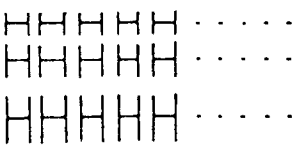
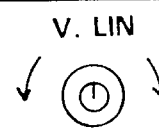
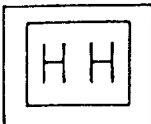
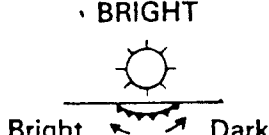
11. SUB-CONTRAST

To adjust the subcontrast, display a screen of characters then turn the BRIGHT control to the click-stop position, and the CONTRAST control fully clockwise. Now adjust the SUB-CONTRAST control (VR140) to the position just before the characters become saturated.

12. H. CENTER

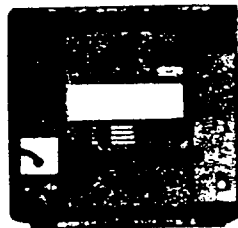
To adjust horizontal centering turn the BRIGHT and the CONTRAST controls fully clockwise with nothing displayed on the screen. Then adjust the H. CENTER VR (R742) so that the raster is centered on the screen.

	Problems	Adjustment
1	Width of the image is not correct. 	H. SIZE 
2	Height of the image is not correct. 	V. SIZE 
3	Position of the image is not correct. 	H. POSITION 
		V. POSITION 
4	The image has a diagonal stripes. 	H. HOLD 
5	The image moves vertically (flops). 	V. HOLD 
6	The image is blurred. 	FOCUS 
7	Character heights on the screen are not uniform. 	V. LIN 
8	There is no image. 	CONTRAST 
9	The screen is dark. 	BRIGHT 

	Problems		Adjustment
1	Width of the image is not correct.		H. SIZE 
2	Height of the image is not correct.		V. SIZE 
3	Position of the image is not correct.		H. POSITION 
			V. POSITION 
4	The image has a diagonal stripes.		H. HOLD 
5	The image moves vertically (flops).		V. HOLD 
6	The image is blurred.		FOCUS 
7	Character heights on the screen are not uniform.		V. LIN 
8	There is no image.		CONTRAST 
9	The screen is dark.		BRIGHT 

DISASSEMBLY PROCEDURE

The following pictures show the basis chassis. Individual products may be different in details.

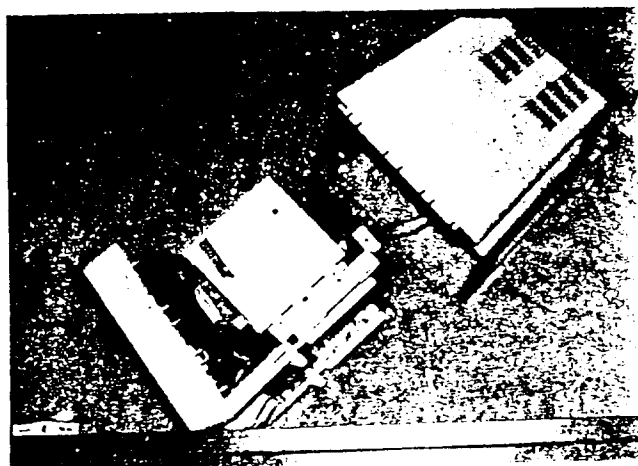


(Fig. 1-1)

1. REMOVING THE BACK COVER

- (1) Unplug the unit from the wall outlet.
- (2) Remove the two screws ① from the bottom, the two screws ② from the top, and the three screws ③ from the rear of the set. (Fig. 1-1)
- (3) Remove back cover.
- (4) Re-assemble in reverse order.

NOTE: Tilting the front block by 45° helps when re-assembling back cover. (Fig. 1-2)



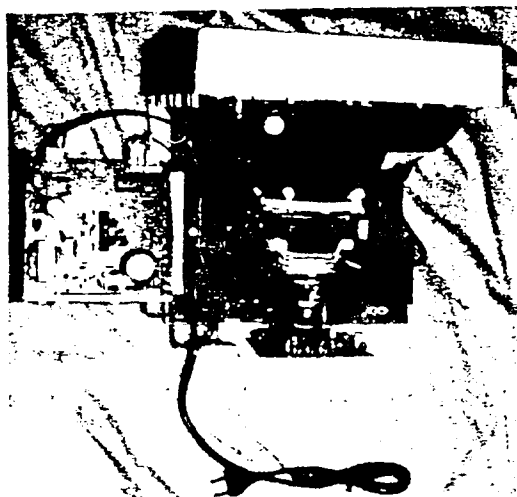
(Fig. 1-2)

2. SERVICING THE POWER SUPPLY BLOCK

- (1) Remove the screw ④ (Fig. 1-2)
- (2) Disconnect power supply connectors I, II, III, IV. (Fig. 2-1)

NOTE: Connector names are as follows.

- I A.C. Power Cord Connector.
- II Power Switch Connector.
- III Auto Degaussing Connector.
- IV B Connector.

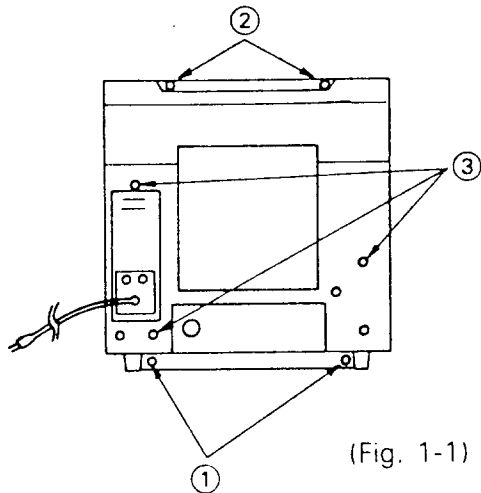


(Fig. 2-1)

- (3) Remove the screw ⑥ and take off the I. C. holding metal plate ⑦. (Fig. 2-1)
- (4) Remove the screw ⑤ and slide the power supply PWB to the front. (Fig. 1-2, Fig. 1-3)
- (5) Re-assemble in reverse order.

DISASSEMBLY PROCEDURE

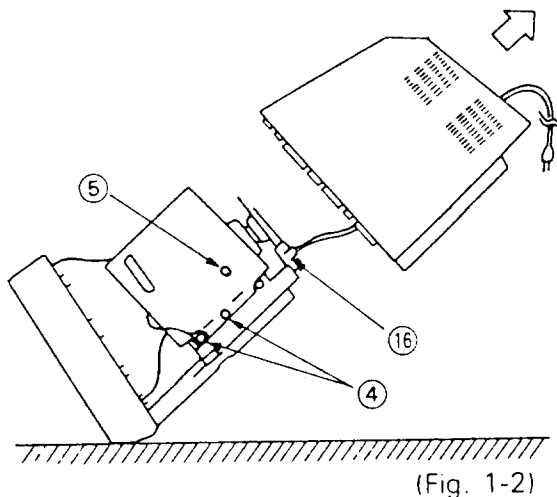
The following pictures show the basis chassis. Individual products may be different in details.



1. REMOVING THE BACK COVER

- (1) Unplug the unit from the wall outlet.
- (2) Remove the two screws ① from the bottom, the two screws ② from the top, and the three screws ③ from the rear of the set. (Fig. 1-1)
- (3) Remove back cover.
- (4) Re-assemble in reverse order.

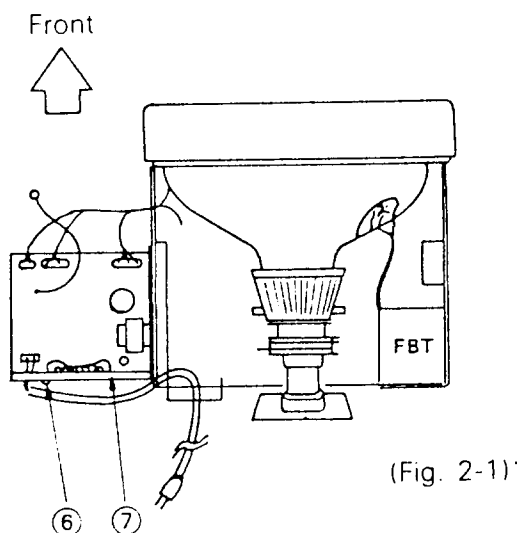
NOTE: Tilting the front block by 45° helps when re-assembling back cover. (Fig. 1-2)



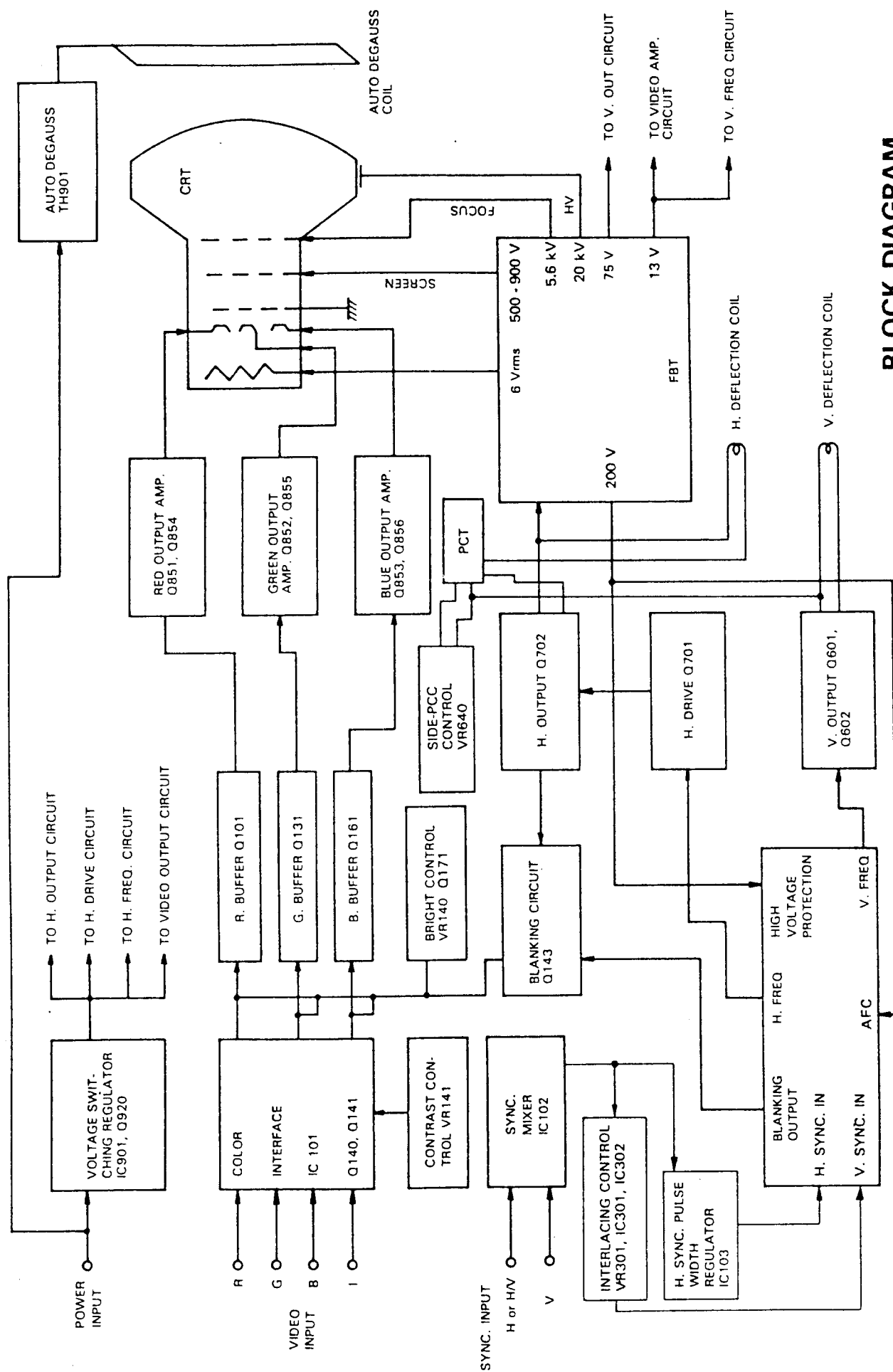
2. SERVICING THE POWER SUPPLY BLOCK

- (1) Remove the screw ④ (Fig. 1-2)
- (2) Disconnect power supply connectors I, II, III, IV. (Fig. 2-1)

NOTE: Connector names are as follows:
 I) A.C. Power Cord Connector.
 II) Power Switch Connector
 III) Auto Degaussing Connector.
 IV) B Connector



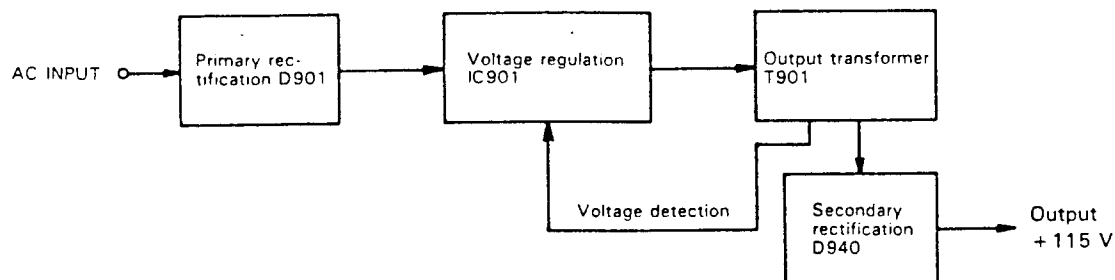
- (3) Remove the screw ⑥ and take off the I. C. holding metal plate ⑦. (Fig. 2-1)
- (4) Remove the screw ⑤ and slide the power supply PWB to the front. (Fig. 1-2, Fig. 2-1)
- (5) Reassemble in reverse order.



BLOCK DIAGRAM
[Version I]

1. Operation Principles

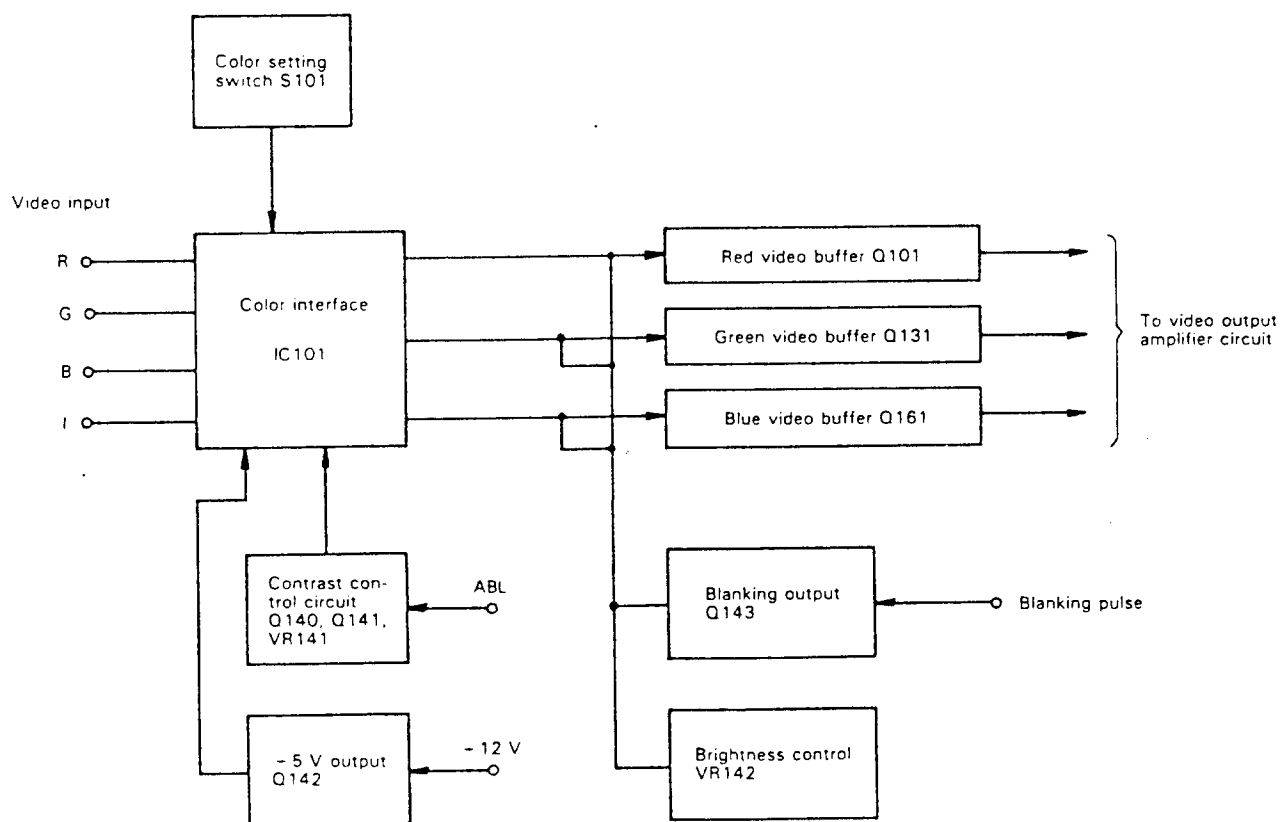
1-1 Voltage regulator circuit



The voltage regulator circuit of this unit uses a switching regulator system. In other words, the input AC supply voltage is rectified to unfiltered DC voltage by the primary rectifier circuit. This voltage is converted to high-frequency pulses by the voltage regulator IC (IC901) which simultaneously performs pulse width control for regulation of a secondary rectification output. The DC output with no ripple (+115V) is obtained by the secondary rectifier D940 following the passage through the output transformer T901. This IC has a built-in overcurrent protection circuit.

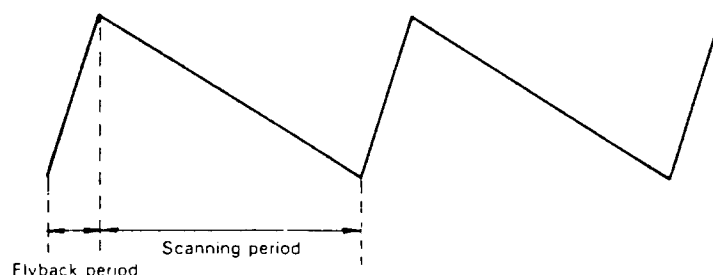
1-2 Video circuit

(1) Color interface circuit

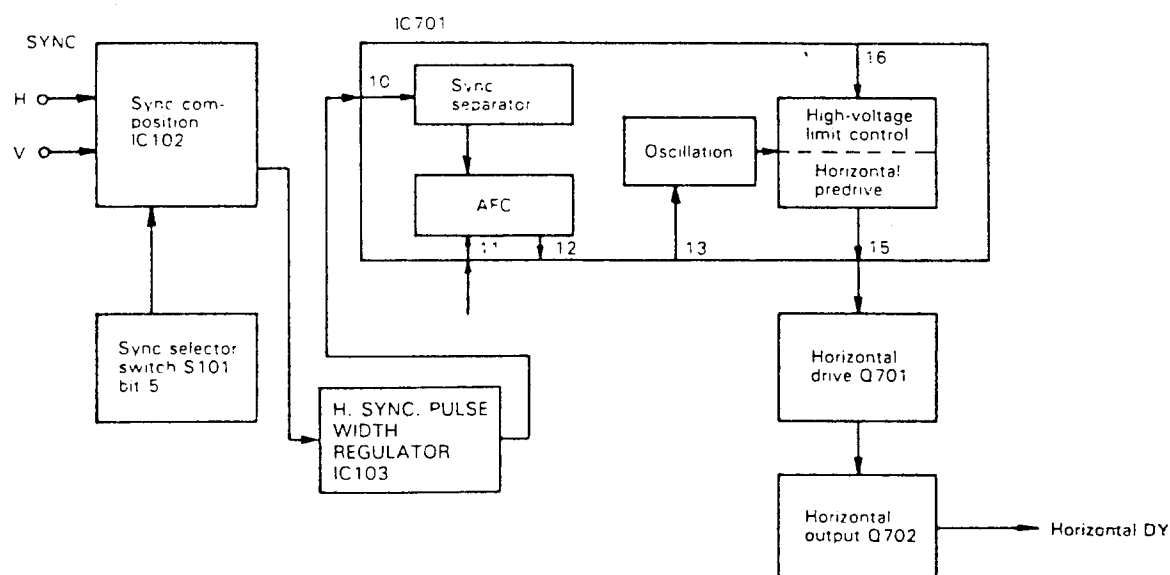


The input video signals R, G, B, I are combined by IC101 into optional colors (e.g. IBM colors, Apple colors, standard colors) set up by the color setting switch S101 and sent to the respective video buffers (Q101, Q131, Q161). The output voltage level of the color interface IC101

The sawtooth oscillating voltage is generated by the charge and discharge of C603. During a vertical flyback period, C603 is charged from pin ③ of the IC701 by the switching transistor inside the IC. During a scanning period, it is discharged by the resistor R602 and the vertical linearity control VS701 ④ connected to pin ④ of the IC. As a result, the potential slowly decreases. When this potential reaches the same level as that applied to pin ⑦ of the IC, the charging starts again by the switching transistor in the IC, corresponding to the flyback period. Meanwhile, the output voltage applied to the deflection yoke is amplified by the amplifier circuit inside the IC and applied to the vertical output transistor Q601, Q602 from pin ① of the IC. These transistors drive the vertical DY.



1-4 Horizontal deflection circuit



(1) AFC circuit

The triangular voltage generated from the flyback transformer pulses is applied to pin ⑪ of the IC701 and the sync signal is applied directly to the AFC circuit from the sync separator circuit inside the IC. The AFC circuit compares the phase between these signals and outputs from pin ⑫ of the IC the current proportional to the phase difference. This current is sent from pin ⑬ of the IC via the resistor R702 to the horizontal oscillator circuit for oscillating frequency control.

(2) Oscillator circuit

A triangular oscillating voltage is generated by the capacitors C703, C732. C703 and C732 are charged via the resistors R703, R704 and the H. HOLD control VS701 ① and discharged by the internal circuit of the IC.

From this triangular wave is created a rectangular wave with a duty ratio of 1 to 2 which is output from the pin ⑮ of the IC

PARTS LIST

: for Version 1 /: for Version 2

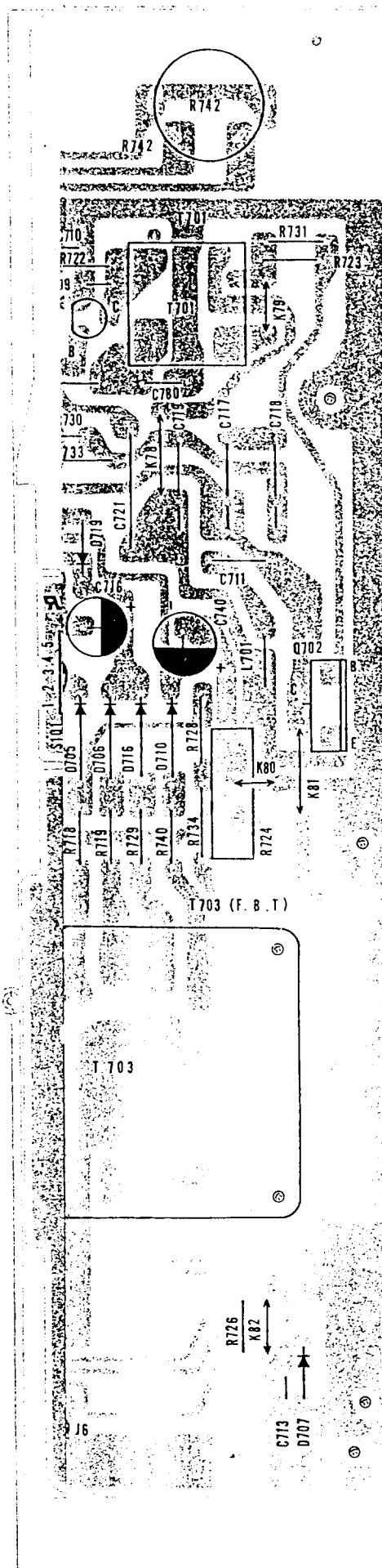
No.	Component	Symbol no.	Ratings			Parts no.	Remarks
26	Resistor	R145, R146, R711	10k ohm,	1/8 W,	Carbon film	01000089	U EABS
	Resistor	R308*	10k ohm,	1/8 W,	Carbon film	01000089G	
27	Resistor	R603, R929	13k ohm,	1/8 W,	Carbon film	01000092	
28	Resistor	R301*	15k ohm,	1/8 W,	Carbon film	F020084T	
	Resistor	R737	15k ohm,	1/8 W,	Carbon film	01000093G	
29	Resistor	R607	18k ohm,	1/8 W,	Carbon film	01000095G	
30	Resistor	R602	22k ohm,	1/8 W,	Carbon film	01000097	
	Resistor	R935	22k ohm,	1/8 W,	Carbon film	01000097G	
31	Resistor	R706	33k ohm,	1/8 W,	Carbon film	01000101	
32	Resistor	R115	75k ohm,	1/8 W,	Carbon film	01000110	
33	Resistor	R725	150k ohm,	1/8 W,	Carbon film	01000117G	
34	Resistor	R857, R859, R861	180k ohm,	1/8 W,	Carbon film	01000119G	
	Resistor	R878, R879, R880	180k ohm,	1/8 W,	Carbon film	01000119G	
35	Resistor	R726	270k ohm,	1/8 W,	Carbon film	01000117	
36	Resistor	R930	4.7 ohm,	1/4 W,	Carbon film	0114009T	
37	Resistor	R610	8.2 ohm,	1/4 W,	Carbon film	0114015	
38	Resistor	R860, R862	100 ohm,	1/4 W,	Carbon film	0114131T	
39	Resistor	R129	680 ohm,	1/4 W,	Carbon film	0114151	
40	Resistor	R928	1k ohm,	1/4 W,	Carbon film	0114161T	
41	Resistor	R881	1.8k ohm,	1/4 W,	Carbon film	0114167T	
42	Resistor	R883	2.2k ohm,	1/4 W,	Carbon film	0114169T	
43	Resistor	R882	2.7k ohm,	1/4 W,	Carbon film	0114171T	
44	Resistor	R722	3.3k ohm,	1/4 W,	Carbon film	0114173	
45	Resistor	R921	3.9k ohm,	1/4 W,	Carbon film	0114175T	
46	Resistor	R728	6.8k ohm,	1/4 W,	Carbon film	0114181T	
	Resistor	R734	6.8k ohm,	1/4 W,	Carbon film	0114181	
47	Resistor	R738	30k ohm,	1/4 W,	Carbon film	0114212	
48	Resistor	R730	39k ohm,	1/4 W,	Carbon film	0114215	
49	Resistor	R723	3.9 kohm	1/2 W,	Carbon film	F020014T	
	Resistor	R723	3.9 kohm	1/2 W,	Carbon film	0100007	
50	Resistor	R309*	4.7 ohm,	1/2 W,	Carbon film	F020088T	
51	Resistor	R858	39 ohm,	1/2 W,	Carbon film	F020038G	
52	Resistor	R620	56 ohm,	1/2 W,	Carbon film	F020042	
53	Resistor	R854, R855, R856	150 ohm,	1/2 W,	Carbon film	F020052G	
54	Resistor	R631	470 ohm,	1/2 W,	Carbon film	F020064	
	Resistor	R633	470 ohm,	1/2 W,	Carbon film	F020064T	
	Resistor	R926, R927	470 ohm,	1/2 W,	Carbon film	F020064G	
55	Resistor	R630, R632	680 ohm,	1/2 W,	Carbon film	F020068	
56	Resistor	R618	1.1k ohm,	1/2 W,	Carbon film	F020073G	
57	Resistor	R615, R616	3.3k ohm,	1/2 W,	Carbon film	F020084	
58	Resistor	R955, R956	4.7Mk ohm,	1/2 W,	Metal	F040201	
59	Resistor	R733	18k ohm,	1 W,	Metal oxide	0110175	
60	Resistor	R923	68k ohm,	1 W,	Metal oxide	F040023	
61	Resistor	R924, R925	120k ohm,	1 W,	Metal oxide	F040022	
62	Resistor	R920	1 ohm,	2 W,	Metal oxide	F040033	
63	Resistor	R922	39 ohm,	2 W,	Metal oxide	0110211	
64	Resistor	R851, R852, R853	910 ohm,	2 W,	Metal oxide	0110244G	
	Resistor	R875, R876, R877	910 ohm,	2 W,	Metal oxide	0110244G	
65	Resistor	R832	3.3k ohm,	2 W,	Metal oxide	0110257G	
66	Resistor	R802	8.2k ohm,	2 W,	Metal oxide	0110267G	
67	Resistor	R720	3.3k ohm,	5 W,	Metal oxide	F040042	
68	Resistor	R701	5.6k ohm,	5 W,	Metal oxide	F040041	

PARTS LIST

: for Version 1 /: for Version 2

No.	Component	Symbol no.	Ratings			Parts no.	Remarks
115	Capacitor	C861	180 pF,	50 V,	Ceramic	0244116F	U
116	Capacitor	C862	220 pF,	50 V,	Ceramic	0244230F	
117	Capacitor	C618, C304	560 pF,	50 V,	Ceramic	0244115F	
118	Capacitor	C617	680 pF,	50 V,	Ceramic	0244117F	
119	Capacitor	C704	2200 pF,	50 V,	Ceramic	0244105F	
120	Capacitor	C143, C151, C152	0.01 μ F,	50 V,	Ceramic	0244171F	
	Capacitor	C153, C154, C155	0.01 μ F,	50 V,	Ceramic	0244171F	
	Capacitor	C122, C602, C868	0.01 μ F,	50 V,	Ceramic	0244171F	
	Capacitor	C867, C870	0.01 μ F,	50 V,	Ceramic	0244171F	
121	Capacitor	C902, C903	1000 pF,	125 V,	Ceramic	F150261	
12	Capacitor	C904, C905, C906	4700 pF,	400 V,	Ceramic	0249159	
	Capacitor	C907, C955, C956	4700 pF,	400 V,	Ceramic	0249159	
123	Capacitor	C612	180 pF,	500 V,	Ceramic	F160033F	
124	Capacitor	C709	220 pF,	500 V,	Ceramic	F160034F	
125	Capacitor	C710	820 pF,	500 V,	Ceramic	F160041F	
126	Capacitor	C712	1000 pF,	500 V,	Ceramic	F160042F	
127	Capacitor	C610	4700 pF,	500 V,	Ceramic	F160050F	
	Capacitor	C851, C852, C853	4700 pF,	500 V,	Ceramic	0244565F	
	Capacitor	C857, C858, C859	4700 pF,	500 V,	Ceramic	0244565F	
	Capacitor	C866	4700 pF,	500 V,	Ceramic	0244565F	
128	Capacitor	C923, C927, C944	1000 pF,	1k V,	Ceramic	F160102	
129	Capacitor	C805	1500 pF,	1k V,	Ceramic	F150453	
	Capacitor	C925	1500 pF,	1k V,	Ceramic	F160104	
130	Capacitor	C924	3300 pF	1k V,	Ceramic	F160108	
131	Capacitor	C182, C183, C184	47 pF,	50 V,	Ceramic	0248676	
	Capacitor	C185	47 pF,	50 V,	Ceramic	0248676	
132	Capacitor	C603	1 pF,	25 V,	Ceramic	0292706F	
133	Capacitor	C113	33 pF,	50 V,	Ceramic	0248676	
134	Capacitor	C730	33 pF,	500 V,	Ceramic	F160078F	
135	Capacitor	C110	120 pF,	50 V,	Ceramic	0244228F	
136	Capacitor	C940	180 pF,	2500 V,	Ceramic	0243839	
137	Capacitor	C711	330 pF,	2500 V,	Ceramic	0243837	
138	Capacitor	C703	5600 pF,	50 V,	Polyester film	0279211F	
139	Capacitor	C722	2200 pF,	50 V,	Polyester film	F150102F	
140	Capacitor	C706	0.01 μ F,	50 V,	Polyester film	F150118F	
141	Capacitor	C705	0.015 μ F,	50 V,	Polyester film	F150122F	
142	Capacitor	C302*, C303*, C604	0.022 μ F,	50 V,	Polyester film	F150126F	
	Capacitor	C713	0.022 μ F,	50 V,	Polyester film	F150126F	
143	Capacitor	C605, C731	0.033 μ F,	50 V,	Polyester film	F150130F	
144	Capacitor	C301*, C922	0.047 μ F,	50 V,	Polyester film	F150134F	
145	Capacitor	C901	0.1 μ F,	125 V,	Polyester film	F150244	
146	Capacitor	C780	0.033 μ F,	100 V,	Polypro	0299037F	U
147	Capacitor	C723	0.1 μ F,	200 V,	Polypro	0299926F	
148	Capacitor	C721	0.12 μ F,	200 V,	Polypro	0299927F	
149	Capacitor	C719	0.012 μ F,	630 V,	Polypro	0299982F	
150	Capacitor	C717, C718	0.01 μ F,	630 V,	Polypro	0299981F	
151	Diode	D101, D102	US1040,		Silicon	F380201	
	Diode	D103, D104	US1040,		Silicon	F380201	
	Diode	D105, D111	US1040,		Silicon	F380201	
	Diode	D112, D113	US1040,		Silicon	F380201	
	Diode	D114, D131	US1040,		Silicon	F380201	

MAIN PWB

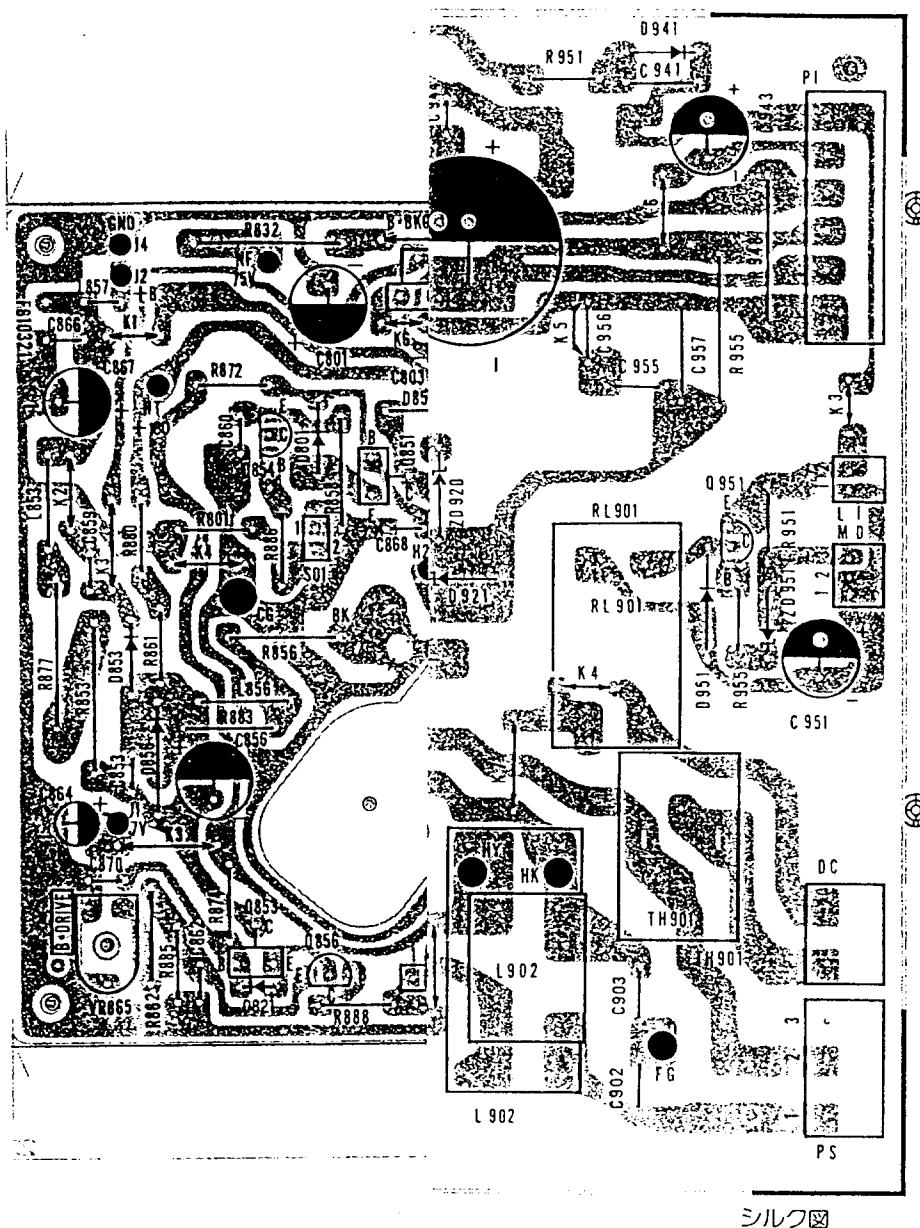


PARTS LIST

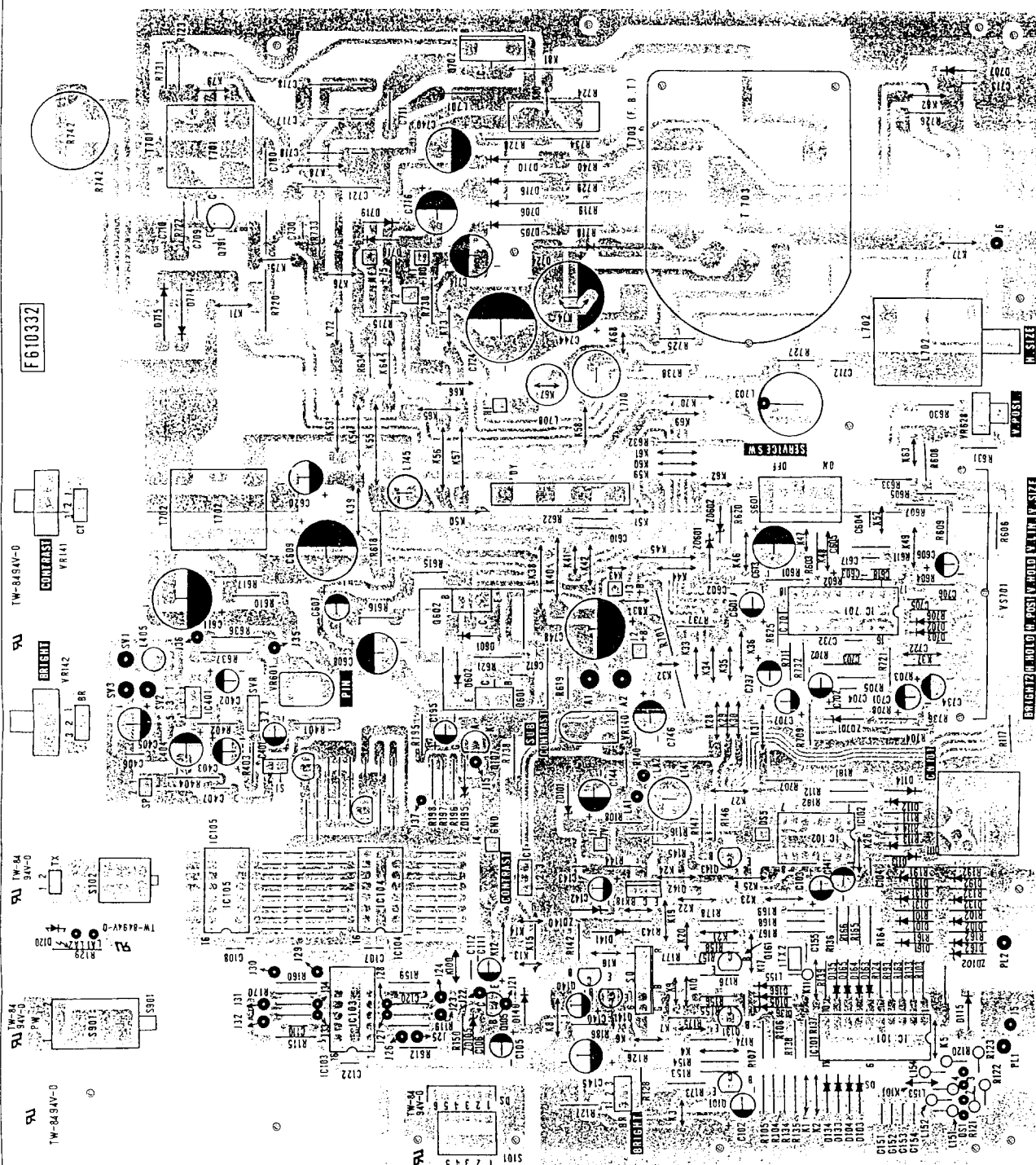
: for Version 1 /: for Version 2

No.	Component	Symbol no.	Ratings	Parts no.	Remarks
186	Transistor	Q143, Q854	2SC655C/D	F360281	U
	Transistor	Q855, Q856	2SC655C/D	F360281	
187	Transistor	Q142	2SC3179Y/G	F360141	
188	Transistor	Q851, Q852, Q853	2SC2911(S/T)	F360151	
189	Transistor	Q702	2SC3026	F360341	
190	Transistor	Q601, Q602	2SD386A	F360121	
191	Transistor	Q920	2SD1207	F360231	
192	Transistor	Q141	2SD468C	F360161	
193	Transistor	Q702	2SD1397	F360171	
					E.B.A.S
194	Coil	L701	Heater choke coil 0.35 μ H	2120333	
195	Coil	L708, L724	Filter coil 22 μ H	2122094	
196	Coil	L141, L745, L857	Filter coil 100 μ H	2120482	
197	Coil	L710	Filter coil 3300 μ H	2120484	
198	Coil	L901, L902	Line filter	F330051	
199	Coil	L702	H. SIZE	F320043	
200	Coil	L703	H. LIN	F320052	
201	Coil	L854, L855, L856	4.7 μ H Axial	2122235T	
202	Coil	L851, L852	10 μ H Axial	2122239T	
203	Coil	L853	100 μ H Axial	2122253T	
	Coil	L151, L152, L153	100 μ H Axial	2122253F	
	Coil	L154, L155	100 μ H Axial	2122253F	
204	Transformer	T701	H. DRIVE	2260071	
205	Transformer	T702	Pin. cushion transformer	F330041	
206	Transformer	T901	Switching transformer	F290074	
207	Transformer	T703	Flyback transformer	F310053	
208	Switch	S101	DIP switch	F470081	
209	Switch	S601	SLWK22	F470031	
210	Switch	S102	Multiple switch J-K2188	F470051	
211	Connector	CN101	TCS4480-01-1011	F500051	
212	Thermister	TH901	PTC thermister 120 V	F400001	U
213	Thermister	TH901	PTC thermister 200 V	2340471	E.B.A.S
214	Fuse	F701	Fuse TSCR 0.63 A	F690031	U
215	Fuse	F901	Fuse ST3 3.15 A	2720902	
216	Fuse	F901	Fuse SET 3.15 A	2720402	

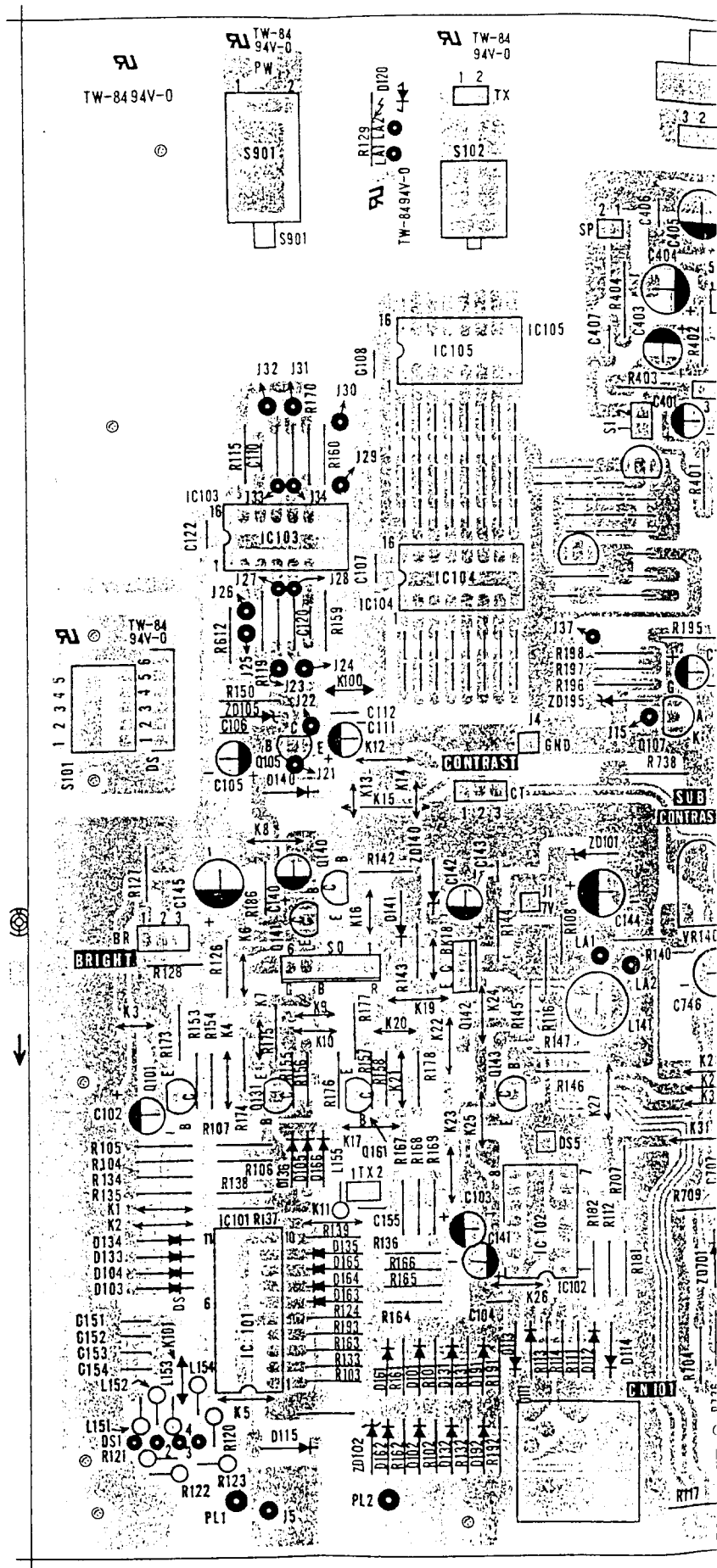
CPT SOCKET PWB



PWB LAYOUT
MAIN PWB



PWB LAYOUT MAIN PWB



TW-84 94V-0

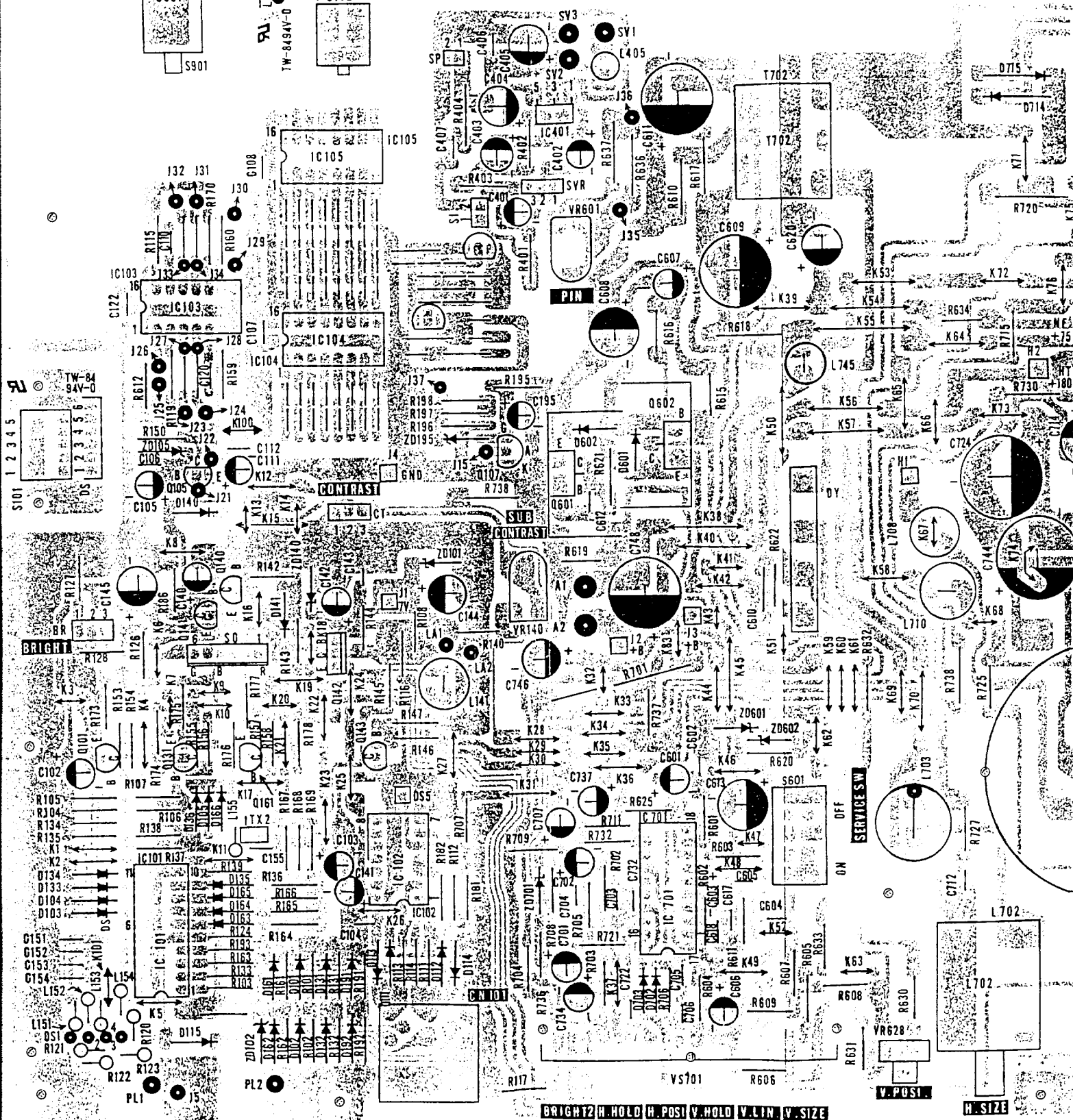
TW-84 94V-0
PW
S901

TW-84 94V-0
TX
S102

BRIGHT
VR142
BR

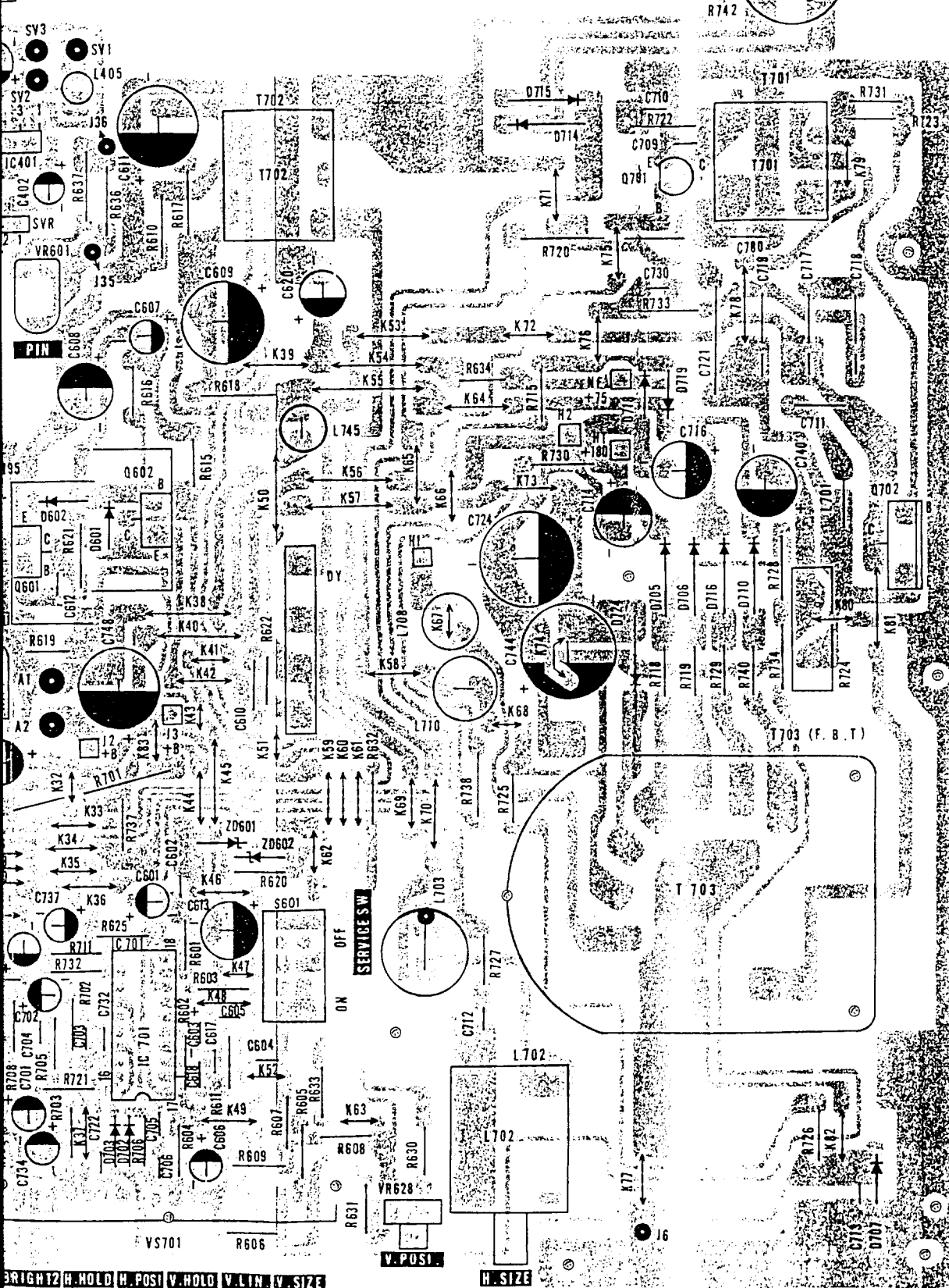
CONTRAST
VR141
CT

F610332



TW-8494V-0

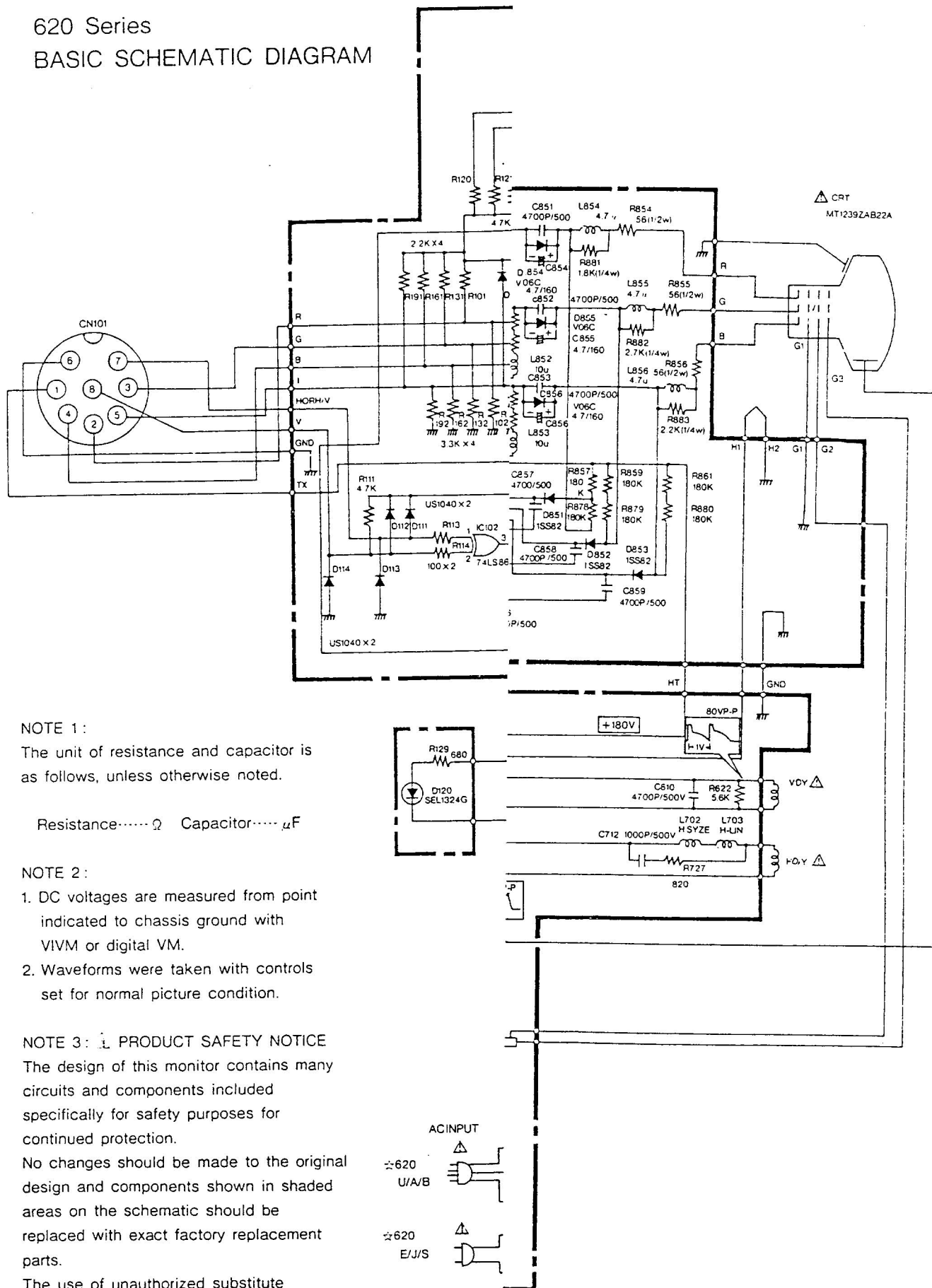
F610332



BRIGHT H. HOLD H. POSI V. HOLD V. LIN. V. SIZE

H. SIZE

620 Series BASIC SCHEMATIC DIAGRAM



NOTE 1:

The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance..... Ω Capacitor..... μF

NOTE 2:

1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.

NOTE 3: 1. PRODUCT SAFETY NOTICE

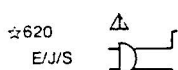
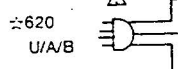
The design of this monitor contains many circuits and components included specifically for safety purposes for continued protection.

No changes should be made to the original design and components shown in shaded areas on the schematic should be replaced with exact factory replacement parts.

The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard.

Service should be performed by qualified personnel only.

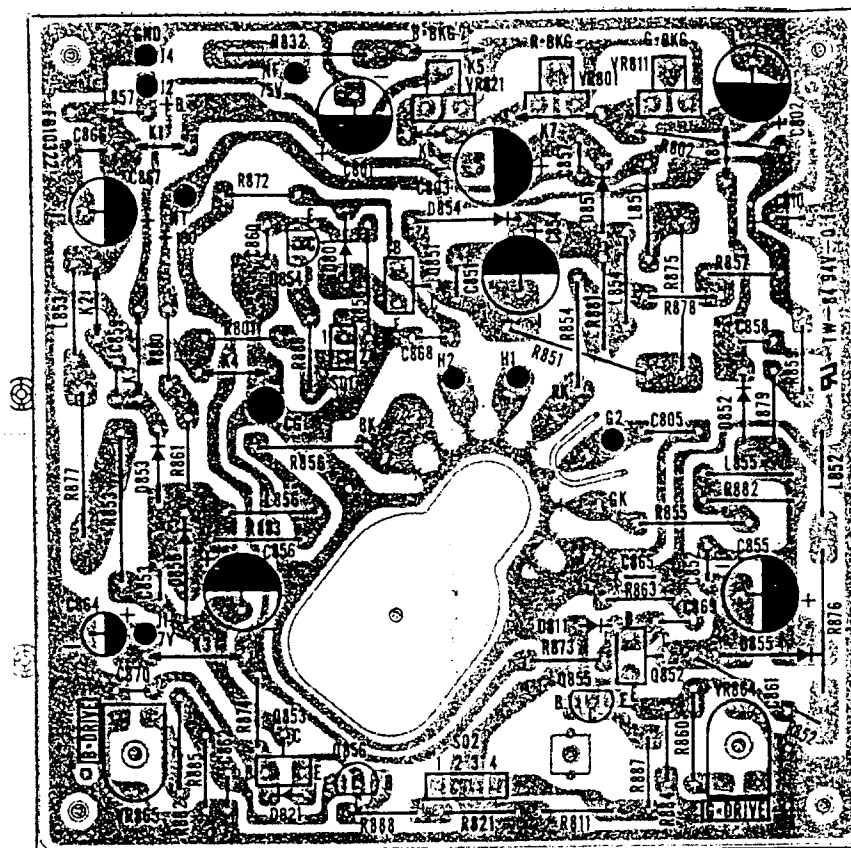
AC INPUT



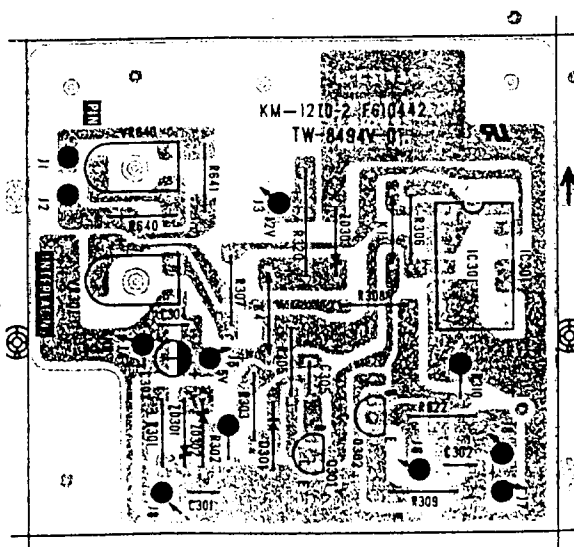
620J
620U
620E/S
620B/A

PWB LAYOUT

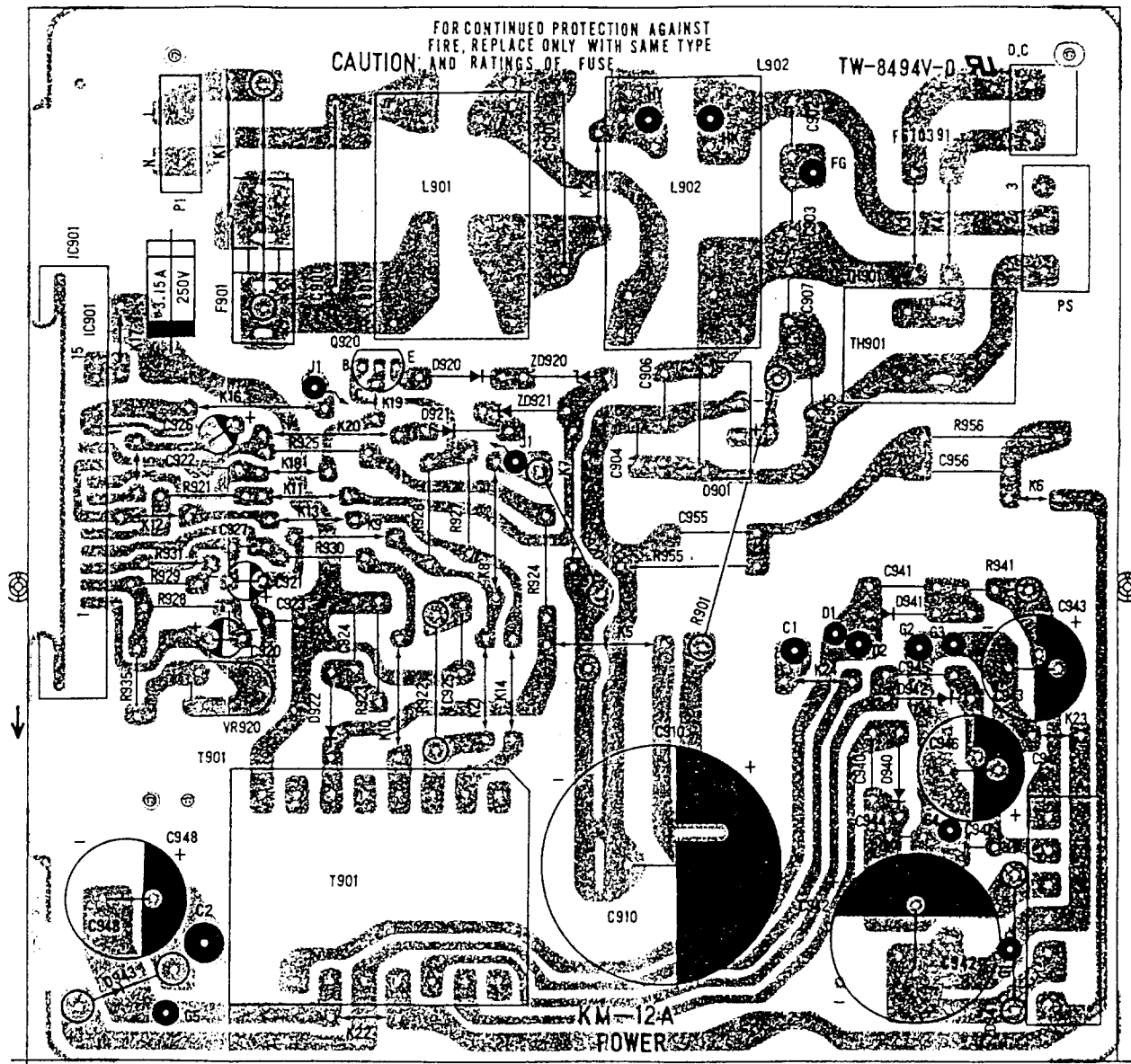
CPT SOCKET PWB



ID PWB

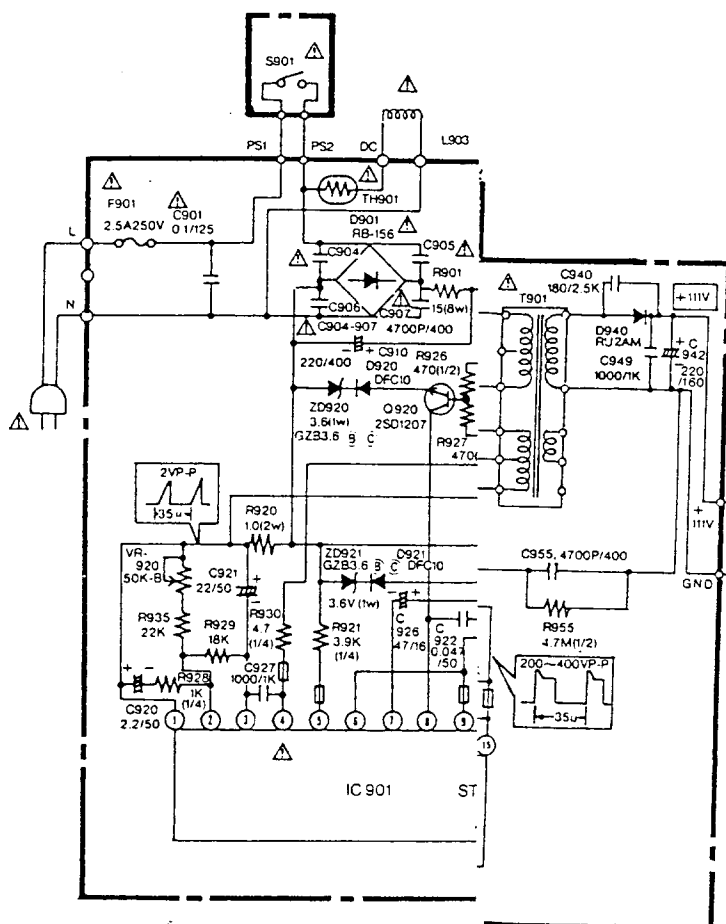


SWITCHING REG. PWB

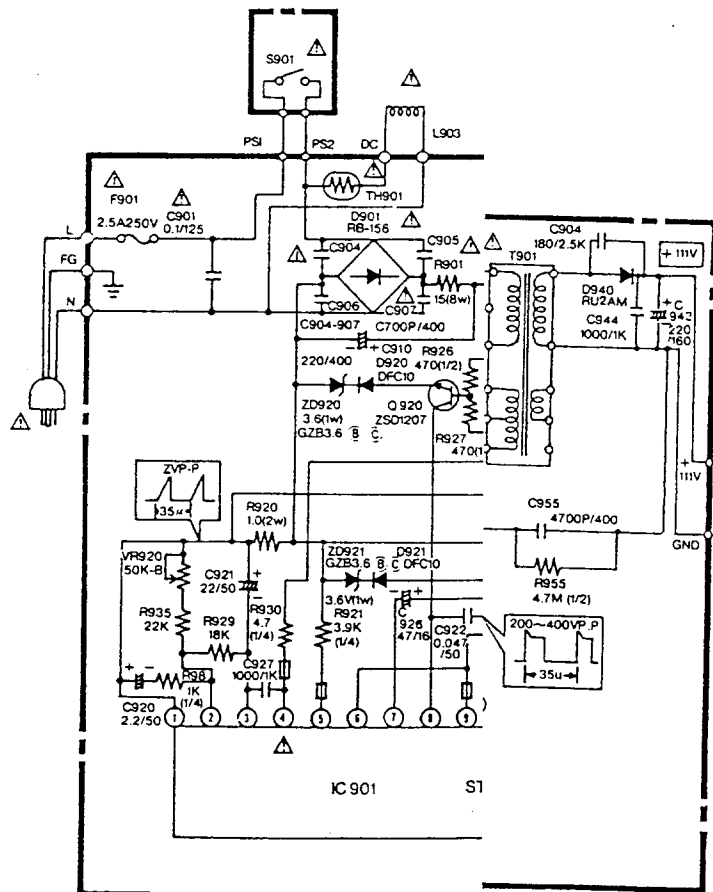


POWER SUPPLY. SCHEMATIC

(1) 620E/S
AC INPUT
220V 50Hz



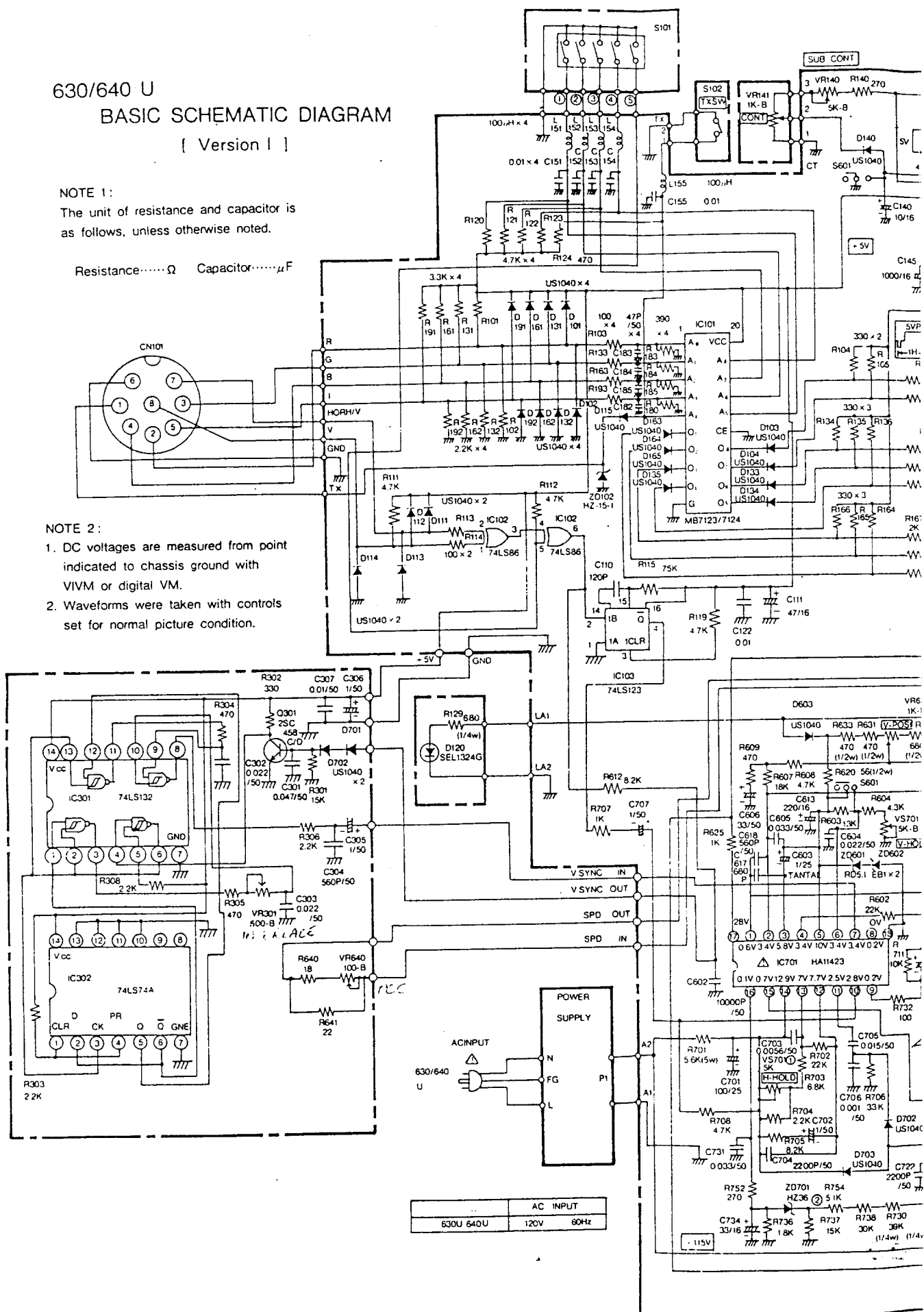
(2) 620B/A
AC INPUT
240V 50Hz



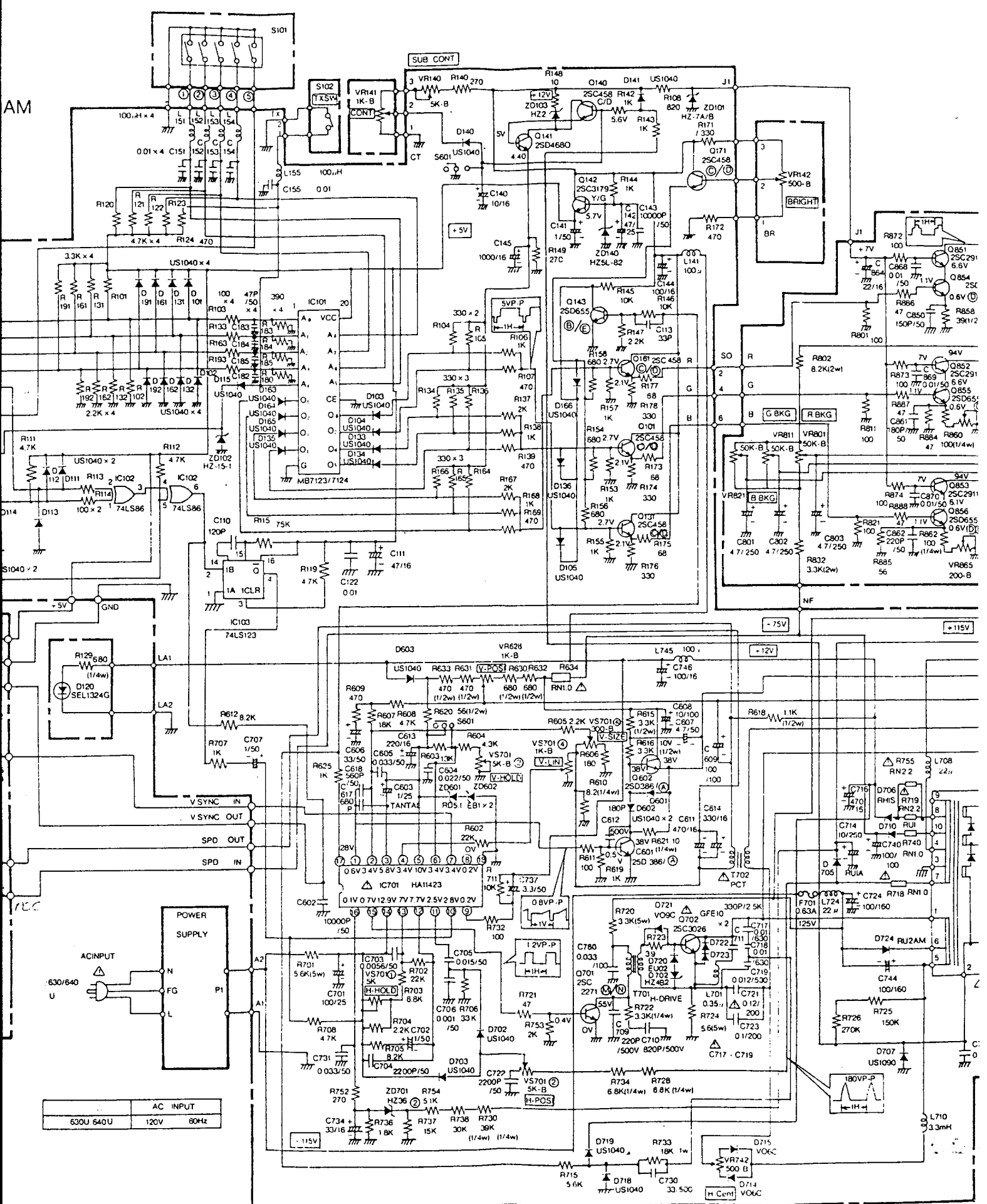
REGRET THIS
PAGE IS AS PER
ORIGINAL

NOTE 1:
The unit of resistance and capacitor is as follows, unless otherwise noted.

The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance..... Ω Capacitor..... μF 

AM

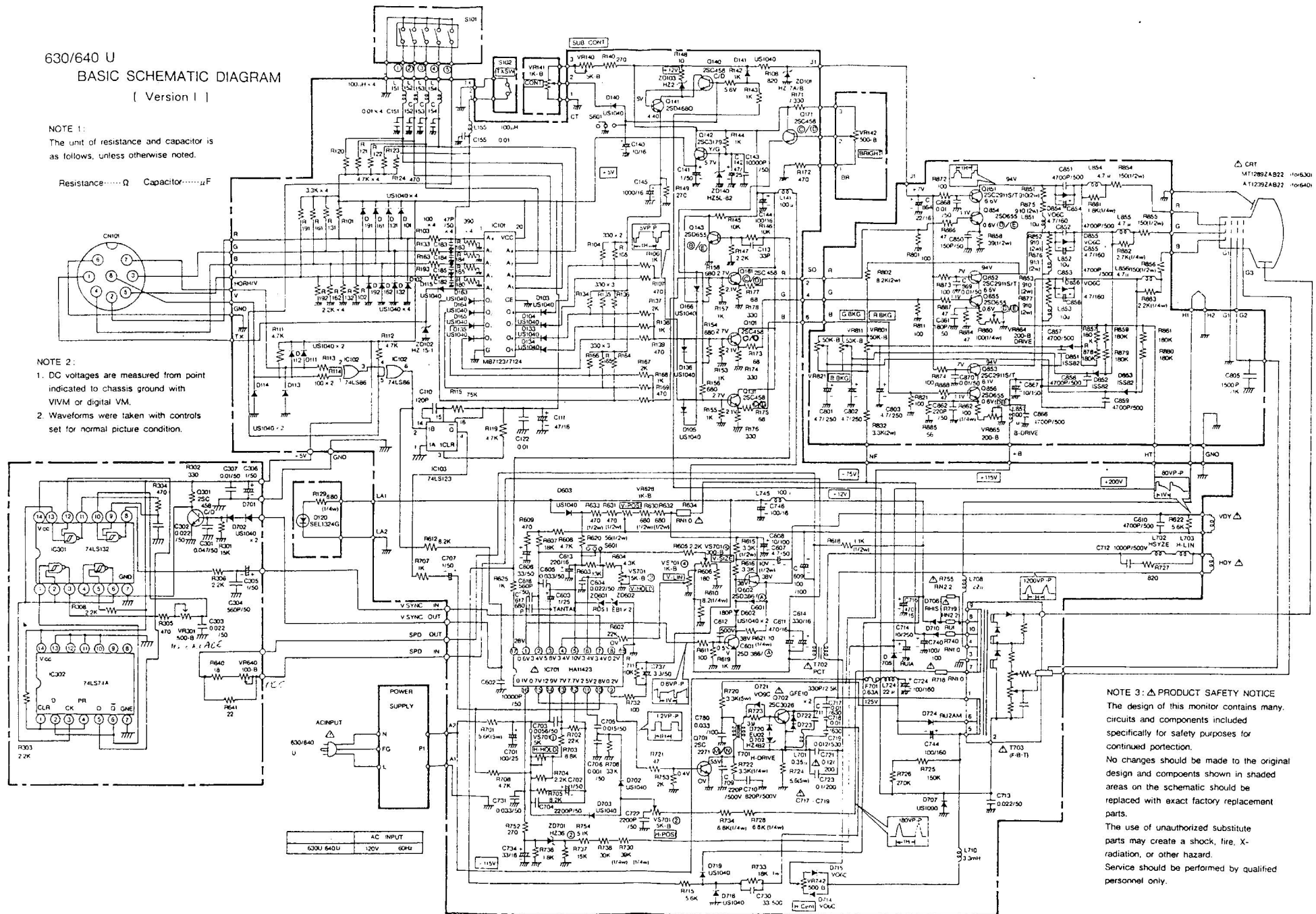


630/640 U BASIC SCHEMATIC DIAGRAM (Version I)

NOTE 1:
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance..... Ω Capacitor..... μ F

- NOTE 2:
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
 2. Waveforms were taken with controls set for normal picture condition.



NOTE 3: **PRODUCT SAFETY NOTICE**
The design of this monitor contains many circuits and components included specifically for safety purposes for continued protection. No changes should be made to the original design and components shown in shaded areas on the schematic should be replaced with exact factory replacement parts. The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard. Service should be performed by qualified personnel only.

630/640 E/A/B/S BASIC SCHEMATIC DIAGRAM [Version I]

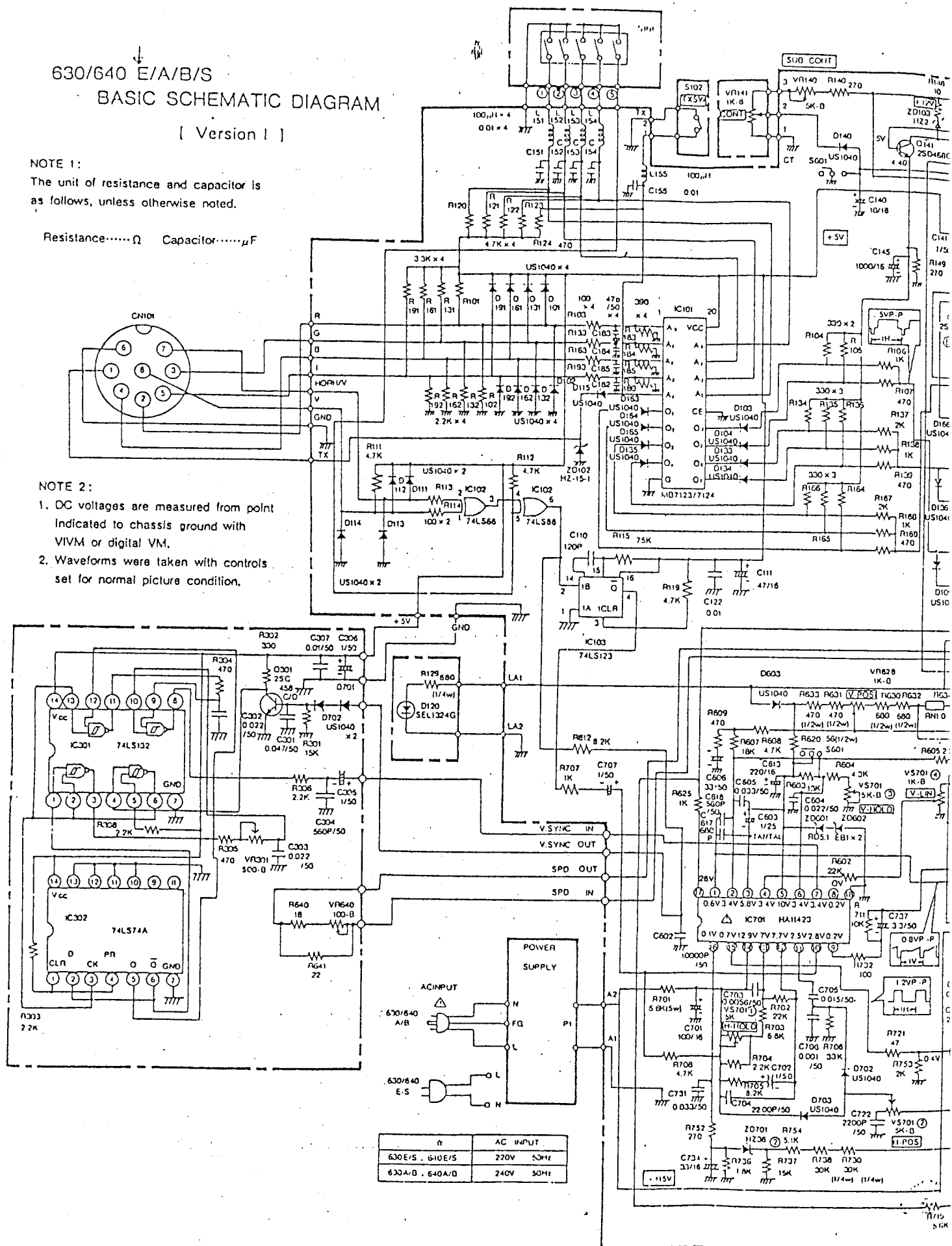
NOTE 1:

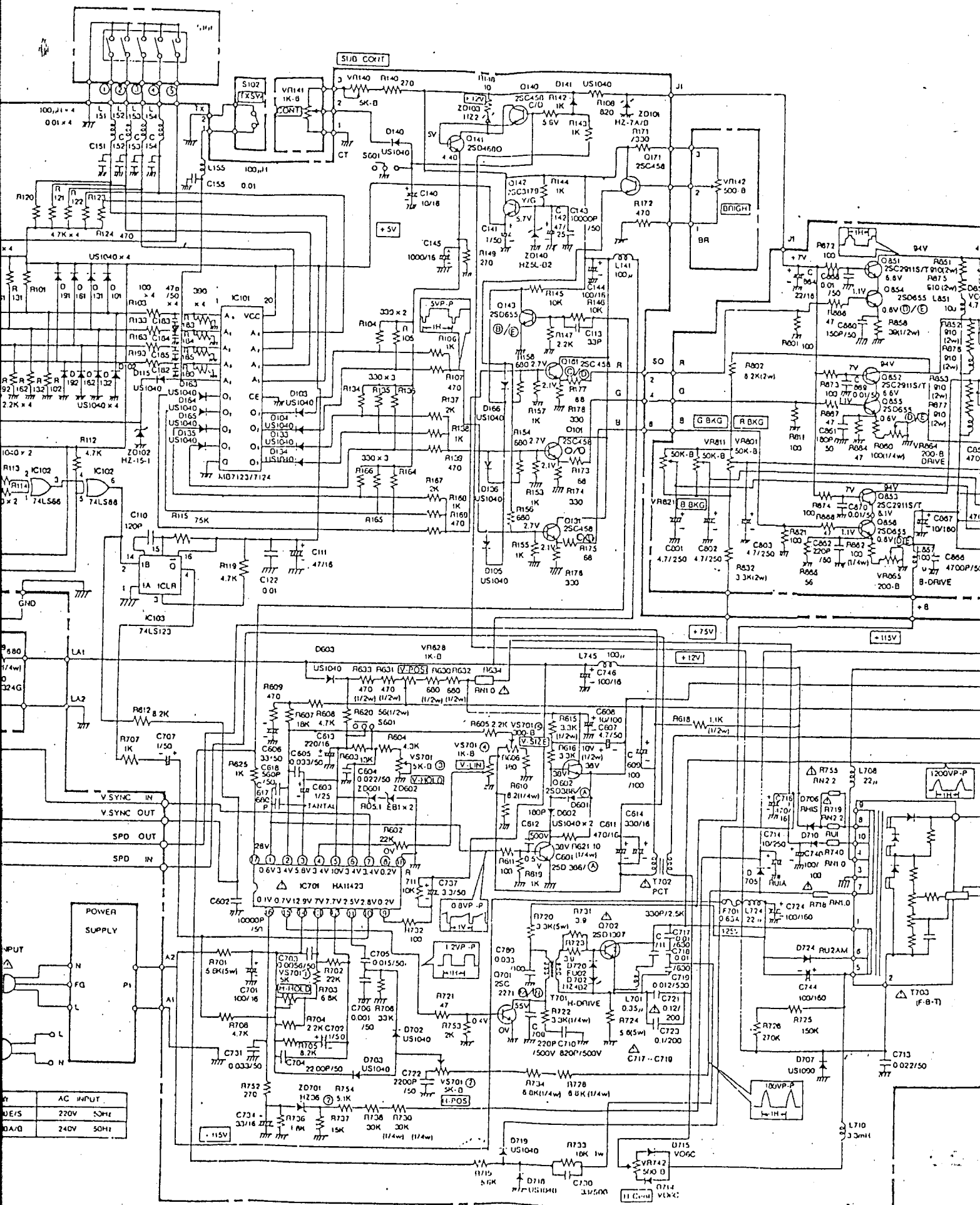
The unit of resistance and capacitor is as follows, unless otherwise noted.

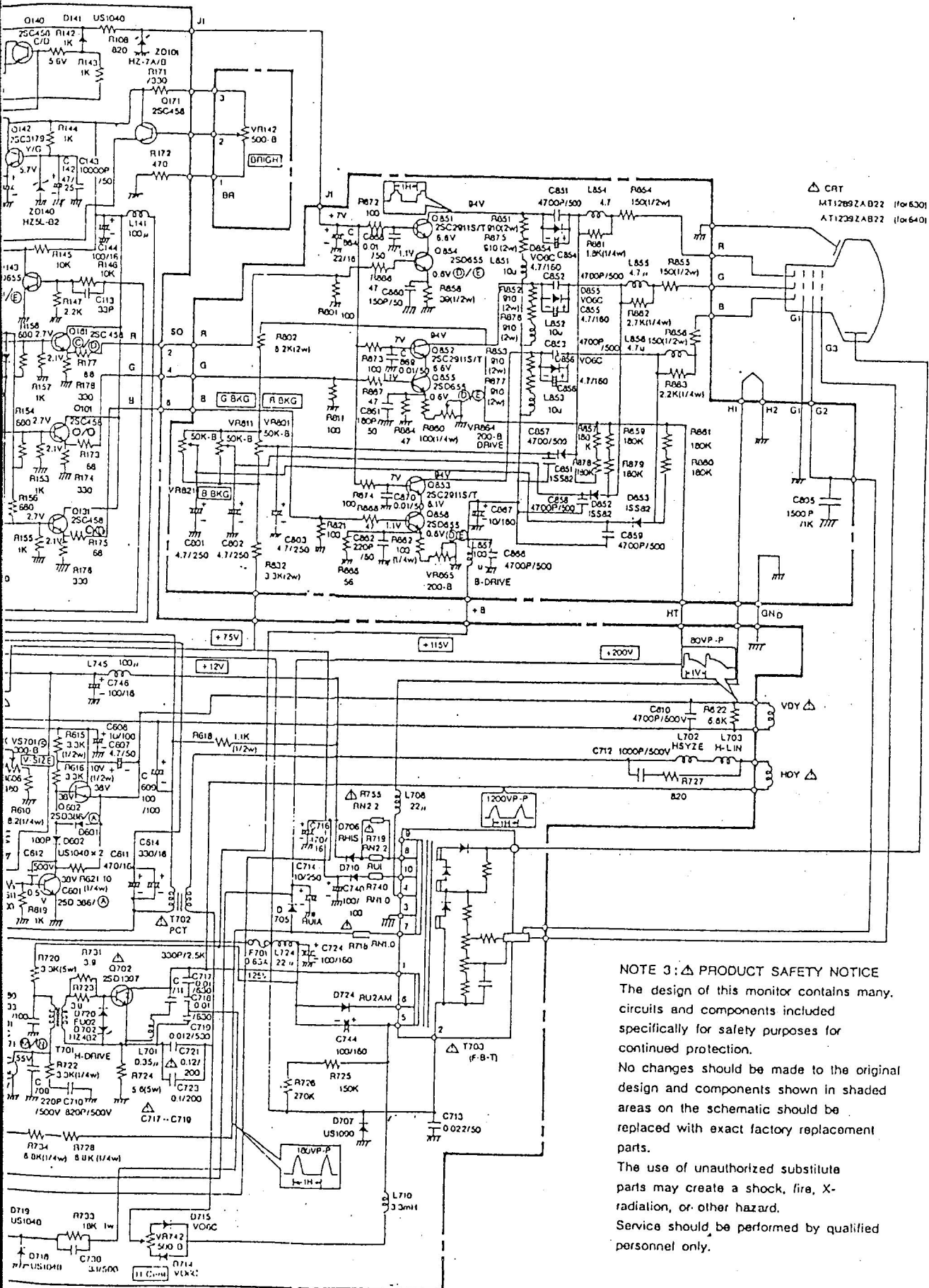
Resistance..... Ω Capacitor..... μF

NOTE 2:

1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.







NOTE 3: Δ PRODUCT SAFETY NOTICE

The design of this monitor contains many circuits and components included specifically for safety purposes for continued protection.

No changes should be made to the original design and components shown in shaded areas on the schematic should be replaced with exact factory replacement parts.

The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard.

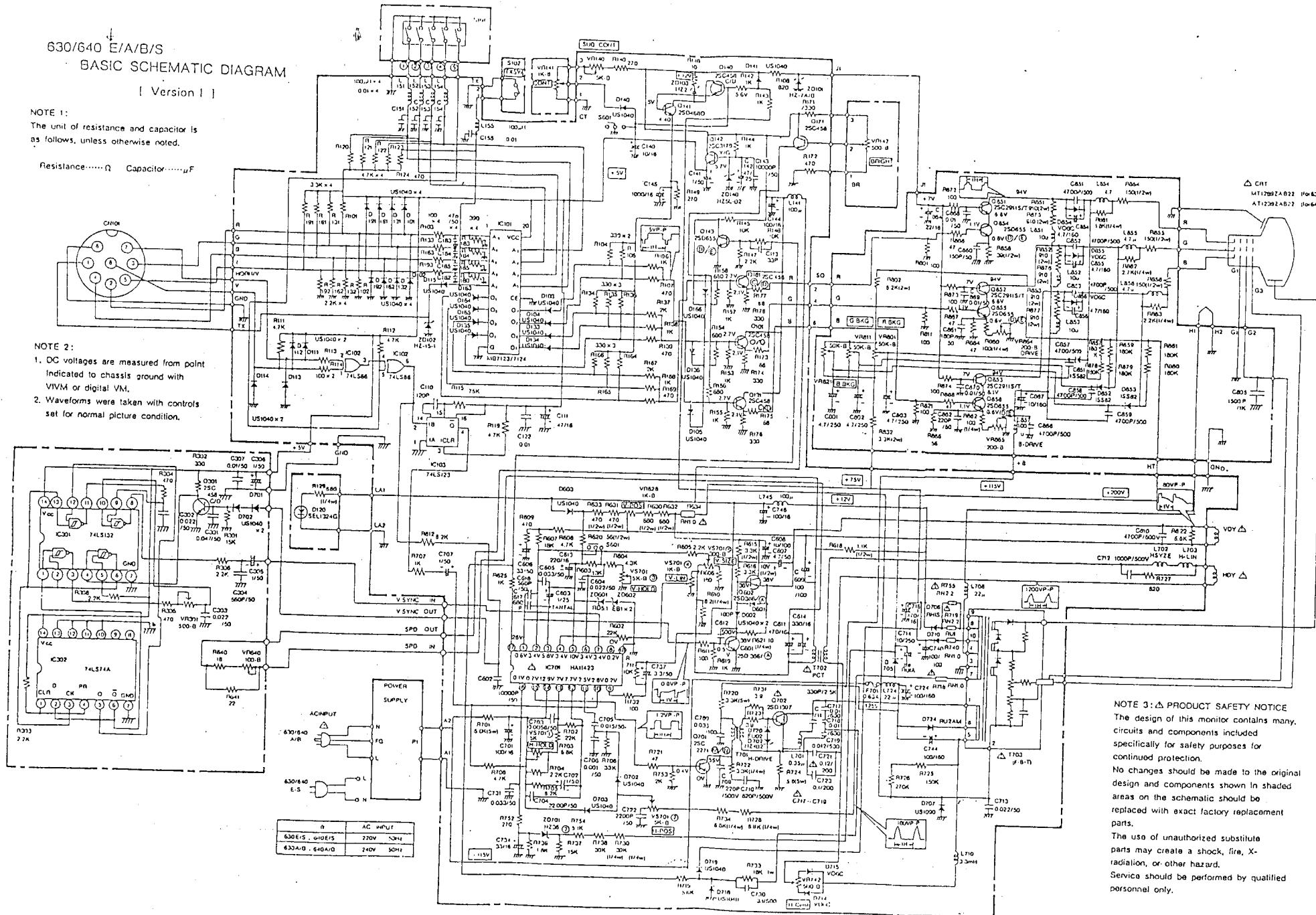
Service should be performed by qualified personnel only.

630/640 E/A/B/S
BASIC SCHEMATIC DIAGRAM
[Version 1]

NOTE 1:
The unit of resistance and capacitor is
as follows, unless otherwise noted.

Resistance..... Ω Capacitor..... μ F

NOTE 2:
1. DC voltages are measured from point
indicated to chassis ground with
VVM or digital VM.
2. Waveforms were taken with controls
set for normal picture condition.



NOTE 3: Δ PRODUCT SAFETY NOTICE
The design of this monitor contains many
circuits and components included
specifically for safety purposes for
continued protection.
No changes should be made to the original
design and components shown in shaded
areas on the schematic should be
replaced with exact factory replacement
parts.
The use of unauthorized substitute
parts may create a shock, fire, X-
radiation, or other hazard.
Service should be performed by qualified
personnel only.

630/640 U BASIC SCHEMATIC DIAGRAM [Version II]

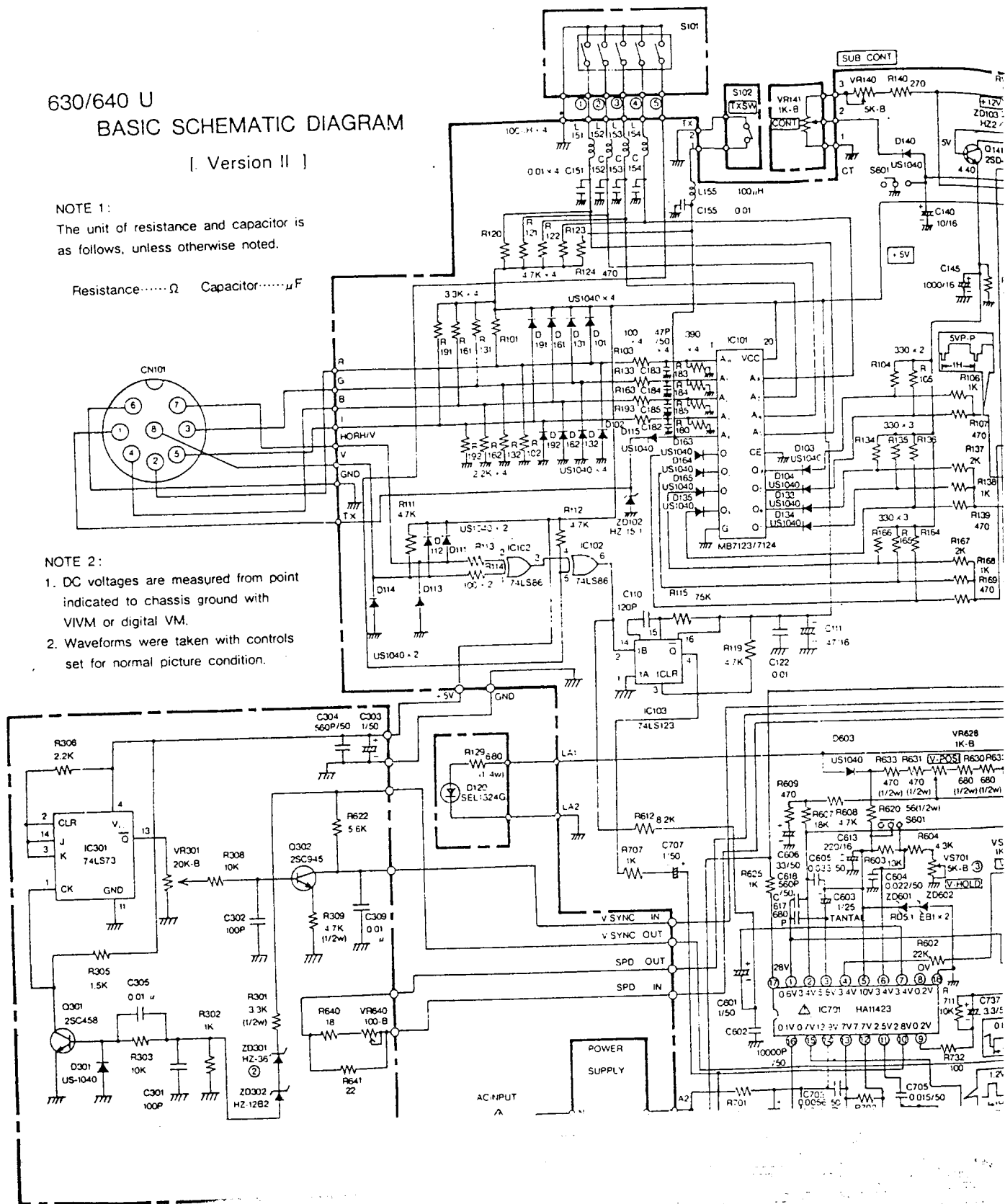
NOTE 1:

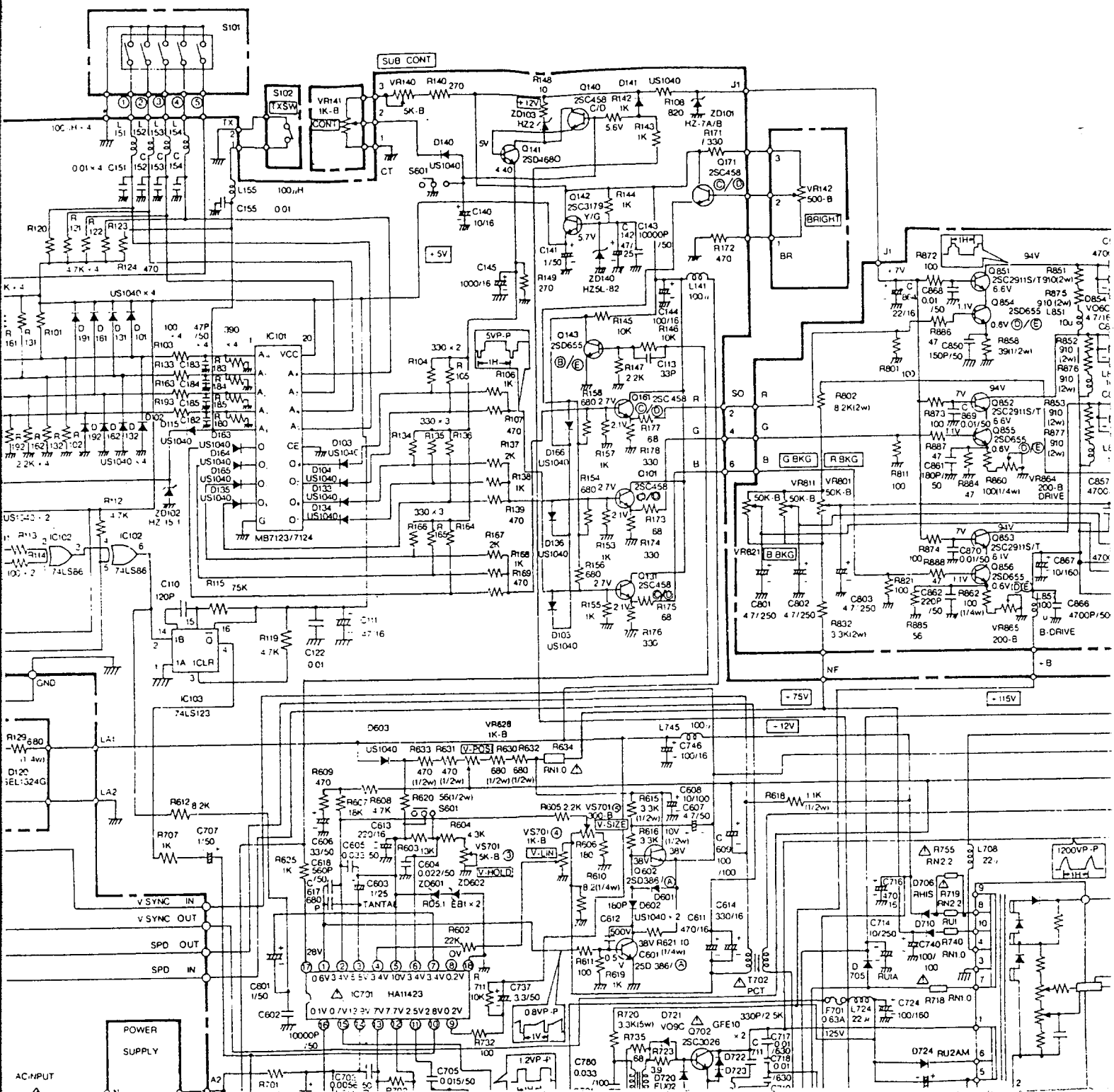
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance..... Ω Capacitor..... μ F

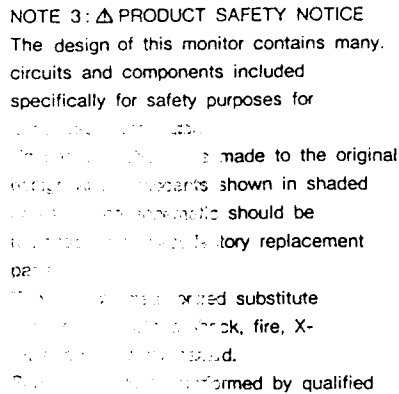
NOTE 2:

1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.





 CRT
 MT1289ZAB22 (for 630)
 AT1220ZAB22 (for 610)



THE QUALITY OF
THIS PAGE IS
THE BEST THAT
IS AVAILABLE

630/640 U BASIC SCHEMATIC DIAGRAM

[Version II]

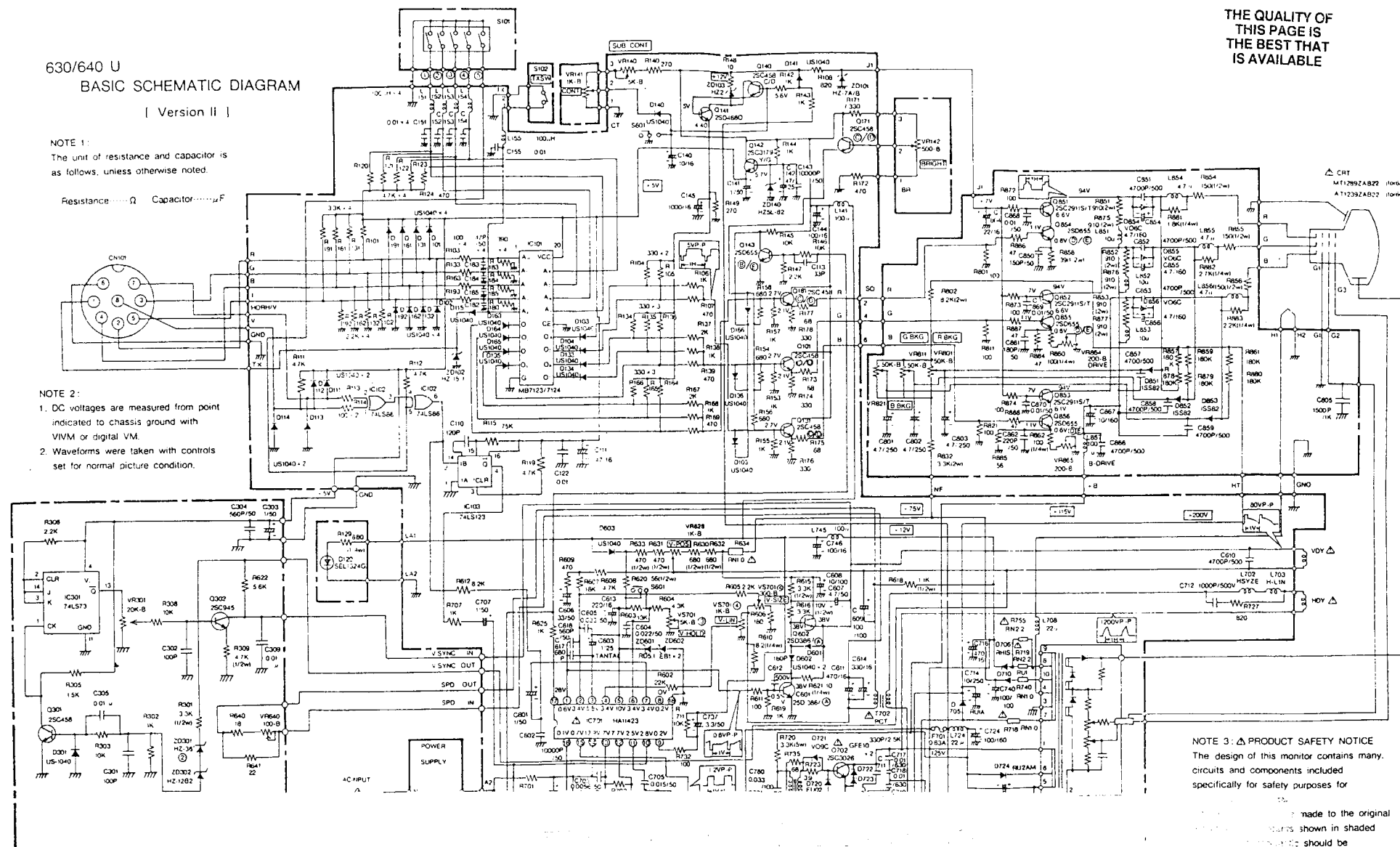
NOTE 1:

The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance..... Ω Capacitor..... μ F

NOTE 2:

1. DC voltages are measured from point indicated to chassis ground with VVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.



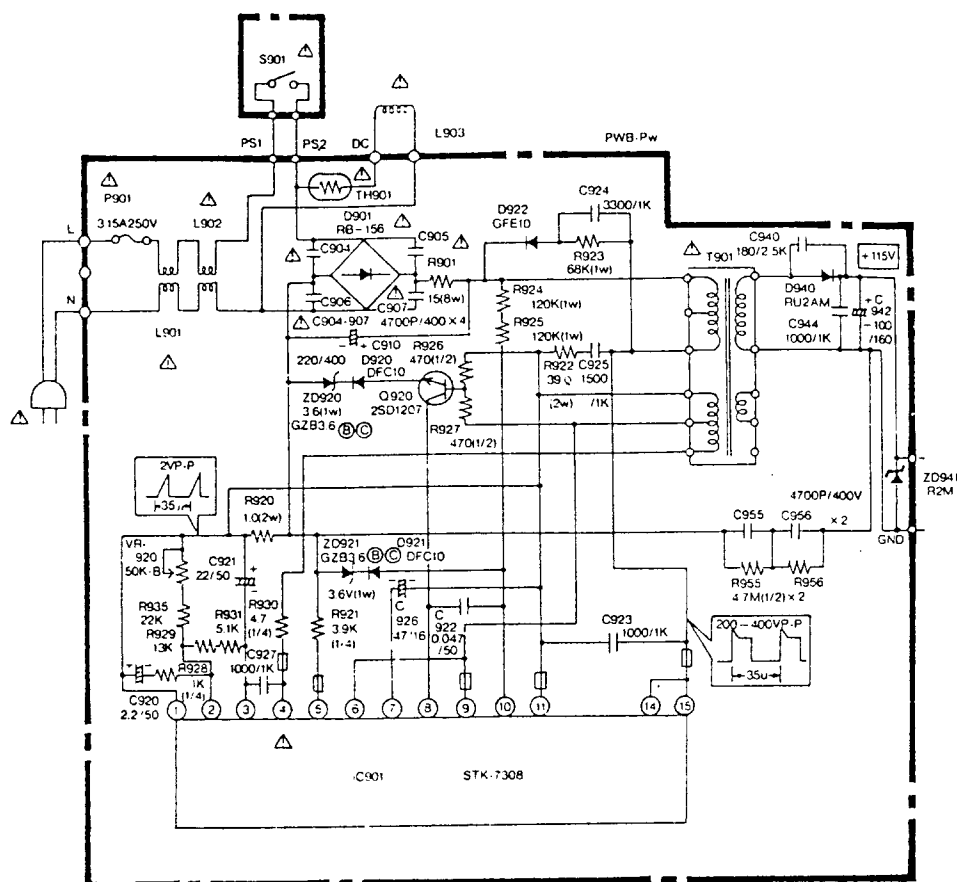
NOTE 3: Δ PRODUCT SAFETY NOTICE
The design of this monitor contains many circuits and components included specifically for safety purposes for

made to the original
shown in shaded
should be
factory replacement

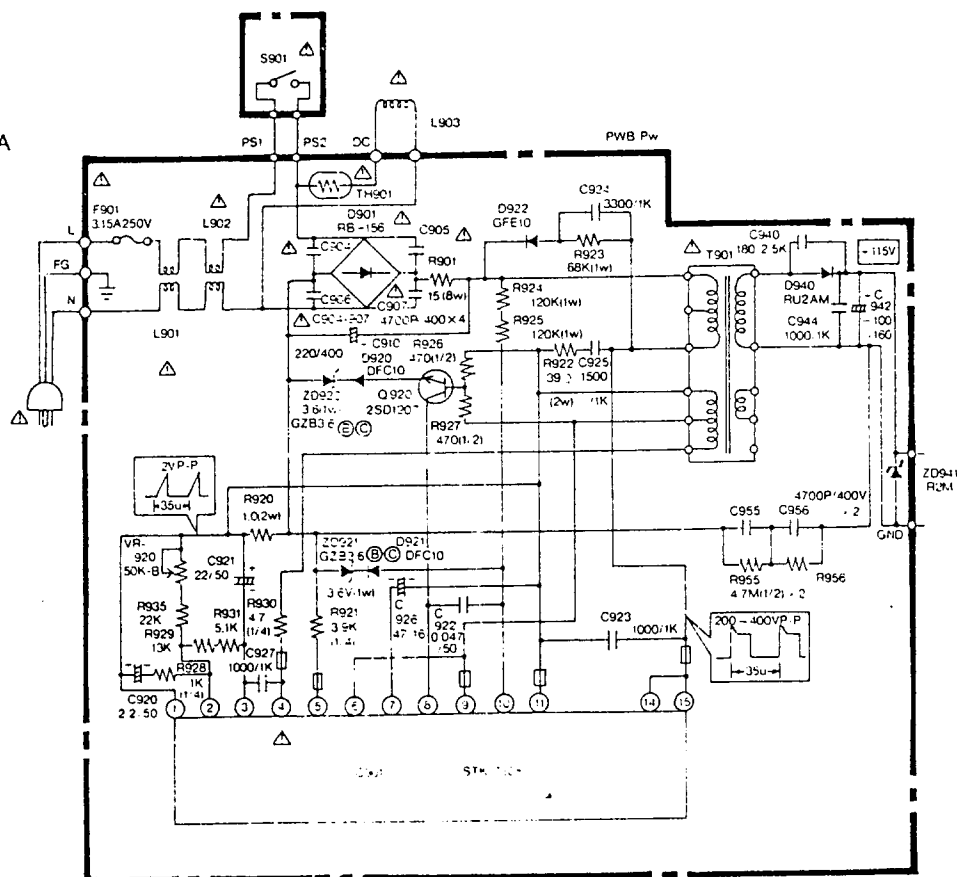
substitute
back, fire, X-
standard.
performed by qualified

POWER SUPPLY SCHEMATIC DIAGRAM

- (1) 630E/S, 640E/S
AC INPUT
220V 50Hz

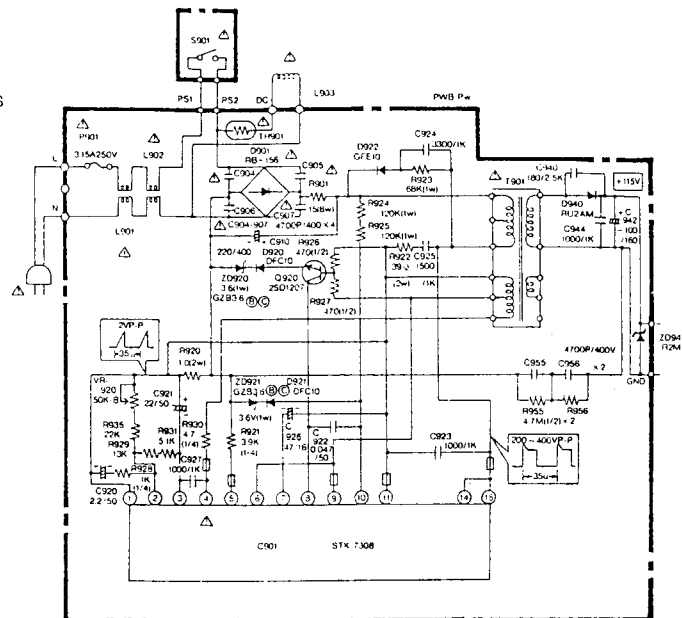


- (2) 630B/A, 640B/A
AC INPUT
240V 50Hz

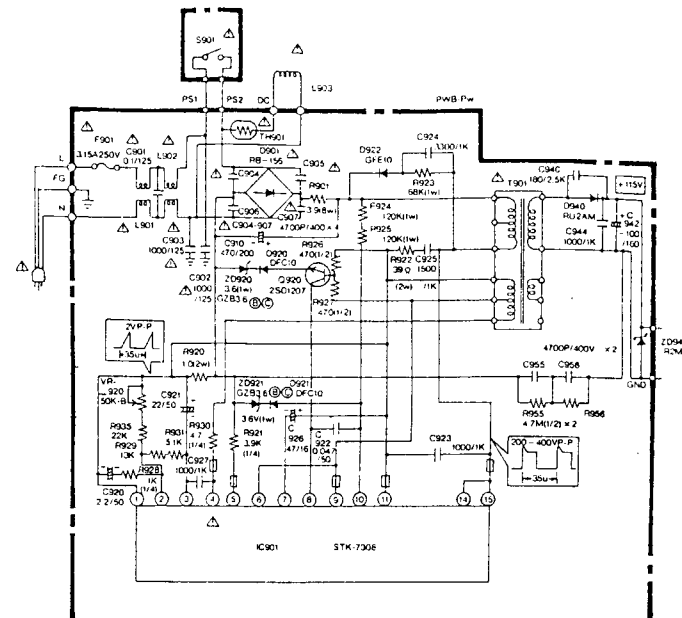


POWER SUPPLY SCHEMATIC DIAGRAM

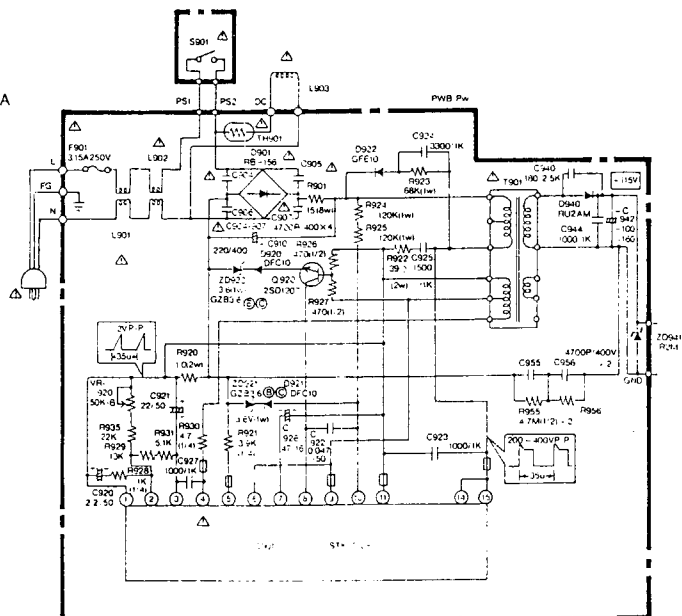
(1) 630E/S,640E/S
AC INPUT
220V 50Hz



(3) 630U,640U
AC INPUT
120V 60Hz



(2) 630B/A,640B/A
AC INPUT
240V 50Hz



(4) 630J,640J
AC INPUT
100V 50/60Hz

